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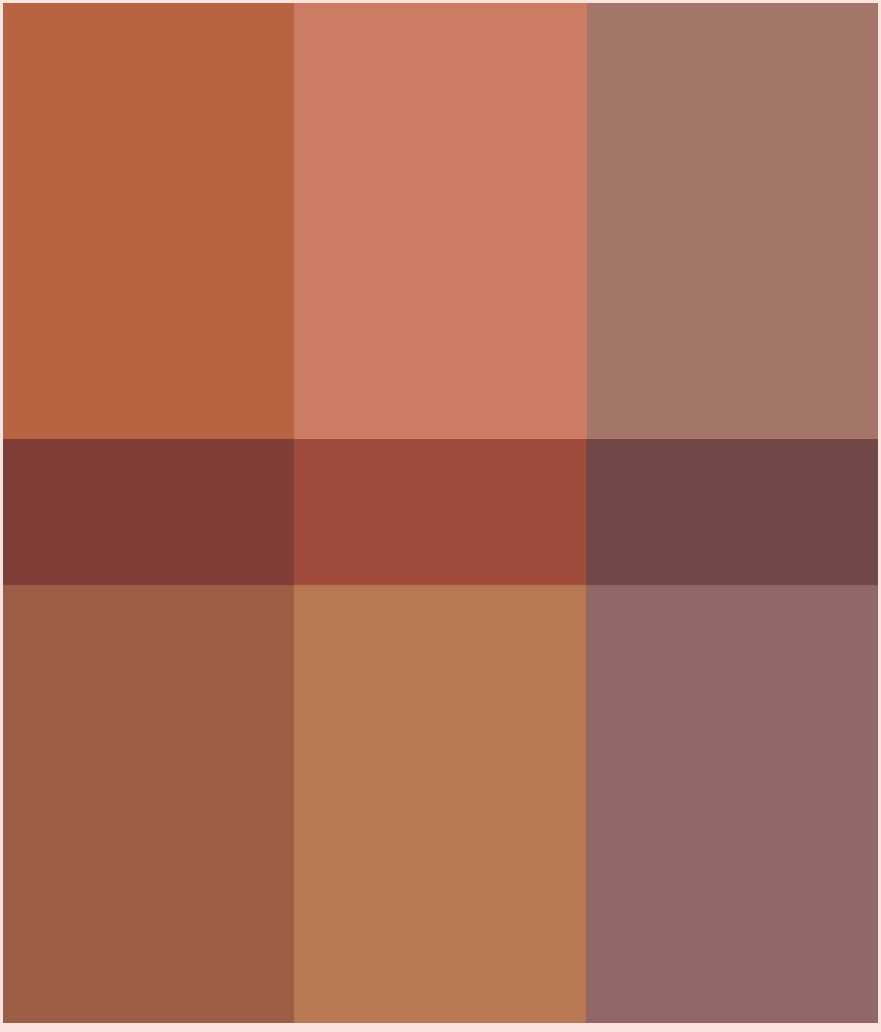

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C·E·P·S *Journal*

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The CEPS Journal is an open-access, peer-reviewed journal devoted to publishing research papers in different fields of education, including scientific.

Aims & Scope

The CEPS Journal is an international peer-reviewed journal with an international board. It publishes original empirical and theoretical studies from a wide variety of academic disciplines related to the field of Teacher Education and Educational Sciences; in particular, it will support comparative studies in the field. Regional context is stressed but the journal remains open to researchers and contributors across all European countries and worldwide. There are four issues per year. Issues are focused on specific areas but there is also space for non-focused articles and book reviews.

About the Publisher

The University of Ljubljana is one of the largest universities in the region (see www.uni-lj.si) and its Faculty of Education (see www.pef.uni-lj.si), established in 1947, has the leading role in teacher education and education sciences in Slovenia. It is well positioned in regional and European cooperation programmes in teaching and research. A publishing unit oversees the dissemination of research results and informs the interested public about new trends in the broad area of teacher education and education sciences; to date, numerous monographs and publications have been published, not just in Slovenian but also in English.

In 2001, the Centre for Educational Policy Studies (CEPS; see http://ceps.pef.uni-lj.si) was established within the Faculty of Education to build upon experience acquired in the broad reform of the national educational system during the period of social transition in the 1990s, to upgrade expertise and to strengthen international cooperation. CEPS has established a number of fruitful contacts, both in the region – particularly with similar institutions in the countries of the Western Balkans – and with interested partners in EU member states and worldwide.

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Revija Centra za študij edukacijskih strategij je mednarodno recenzirana revija z mednarodnim uredniškim odborom in s prostim dostopom. Namenjena je objavljanju člankov s področja izobraževanja učiteljev in edukacijskih ved.

Cilji in namen

Revija je namenjena obravnavanju naslednjih področij: poučevanje, učenje, vzgoja in izobraževanje, socialna pedagogika, specialna in rehabilitacijska pedagogika, predšolska pedagogika, edukacijske politike, supervizija, poučevanje slovenskega jezika in književnosti, poučevanje matematike, računalništva, naravoslovja in tehnike, poučevanje družboslovja in humanistike, poučevanje na področju umetnosti, visokošolsko izobraževanje in izobraževanje odraslih. Poseben poudarek bo namenjen izobraževanju učiteljev in spodbujanju njihovega profesionalnega razvoja.

V reviji so objavljeni znanstveni prispevki, in sicer teoretični prispevki in prispevki, v katerih so predstavljeni rezultati kvantitavnih in kvalitativnih empiričnih raziskav. Še posebej poudarjen je pomen komparativnih raziskav.

Revija izide štirikrat letno. Številke so tematsko opredeljene, v njih pa je prostor tudi za netematske prispevke in predstavitve ter recenzije novih publikacij.

Contents

Reviews

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Editorial

This issue of CEPSj introduces papers that are not a part of a specific focus but fall into the category of Varia. The content of the papers differs, and they comprise topics from the inclusion of differentiation in literacy lessons, college attendance among low-income students, stress among primary school teachers, quality pedagogical practice in early childhood education institutions relating to children at risk of social exclusion, leadership in the organisational culture of preschool institutions and organisational culture in public universities. The second part of this CEPSj Varia issue deals with the influence of Covid-19 on education in different countries.

The first paper, entitled 'The Inclusion of Differentiation in Literacy Lessons in the First and Second Grades of Slovenian Primary School', by Jasna Švajger, introduces the problem of teachers' adaptations of the lessons to the student's individual abilities, prior knowledge, interests, and social skills. Her study, which aims to examine the inclusion of differentiation in literacy lessons in the first and second grades of Slovenian primary schools, was carried out on a smaller scale ($N = 79$). It also aims to determine the views of first- and second-grade primary school teachers on differentiation and how it takes place in literacy lessons, and which factors affect student performance in class. The results show that the inclusion of differentiation in literacy lessons is present throughout the initial literacy teaching process. Slovenian teachers undergo regular training and professional development courses in this area, thus contributing to students' educational success and affecting their personal growth and development. Teachers estimate that the intertwining of individual abilities, family environment, engagement in co-curricular activities and well-developed social skills represents a key factor in student success. It was expected that internal differentiation would be more effective than external differentiation. Surprisingly, however, teachers report that heterogeneous groups do not enhance educational efficiency.

The second paper by Christian Michael Smith and Noah Hirschl, entitled 'College Attendance among Low-Income Youth: Explaining Differences across Wisconsin High Schools', deals with the problems of low-income students' postsecondary participation to remediate their disadvantages and to improve society's overall level of education. Recent research has demonstrated that secondary schools vary considerably in their tendencies to send students to postsecondary education, but existing research has not systematically identified the school characteristics that explain this variation. Identifying these characteristics can help improve low-income students' postsecondary outcomes. Relevant

characteristics are identified using population-level data from Wisconsin, a mid-size state in the United States. It is first shown that Wisconsin's income-based disparities in postsecondary participation are wide. Next, it is shown that several geographic characteristics of schools help explain between-secondary school variation in low-income students' postsecondary outcomes. Finally, whether a dense set of school organisational features explain any remaining variation is tested. The results indicated that these features explain virtually no variation in secondary schools' tendencies to send low-income students to postsecondary education.

The third paper, entitled 'Are they Stress-Free? Examining Stress among Primary School Teachers in Tanzania', by Patrick Severine Kavenuke, Joel Jonathan Kayombo and Mjege Kinyota presents a study in which authors examine the extent of stress among primary school teachers and the factors influencing stress. Overall, the results indicate that teachers' levels of stress range from low to moderate. Moreover, the results from hierarchical regression analysis indicate that factors such as sex, class size, age, career intentions and teaching subject significantly predict teachers' stress. The study concludes that there is a need for the government, policymakers, and school administrators to reduce teachers' workload. Furthermore, school administrators, in particular, should be supportive and design mechanisms that could develop a sense of collegiality among teachers to improve teacher-to-teacher relationships.

Sandra Antulić Majcen and Maja Drvodelić, in their paper 'Quality Pedagogical Practice in Early Childhood Education Institutions Relating to Children at Risk of Social Exclusion', study how the concept of quality in early childhood education and care from various research perspectives, with special emphasis on a review of the literature on the quality of pedagogical practice aimed at children at risk of social exclusion. The paper presents the theoretical model of responding to the needs of children at risk of social exclusion in Croatian early childhood education and care. Special attention is given to the quality of pedagogical practice regarding children at risk of social exclusion as a prerequisite for planning targeted measures and interventions directed at this group of children and their families within the Croatian early childhood education and care system. It was concluded that the key factors for quality pedagogical practice are an interdisciplinary approach of highly qualified professionals, the participation of all key stakeholders within the child's immediate environment, and the connection between relevant policies and practices, which are crucial for early childhood education and care quality.

The fifth paper in this Varia issue, by Vesnica Mlinarević, Ružica Tokić Zec and Ana Cvjetičanin with the title 'A Model of Transformational Leadership

in the Organisational Culture of Preschool Institution', deals with the connection between the characteristics of the leader and the transformational model of leadership in the organisational culture of the preschool institution. This research aims to determine whether the assessments and self-assessments of leaders and preschool teachers differ in the frequency of using the transformational leadership style and to determine the relationship between that style and the leader's personality traits. The research was conducted in a private Croatian preschool institution, which consists of 10 kindergartens. A total of 51 participants in 9 kindergartens participated in the research. The study used a quantitative research approach. The results show that preschool teachers and leaders do not differ significantly in estimates of the frequency of application of the transformational leadership style and that there is a significant correlation between some characteristics of the leader and the transformational model of preschool leadership.

The objective of this research of the sixth paper by Iliriana Tahiraj and Janez Krek, with the title 'Organisational Culture in Public University: A Case Study in Kosovo', was to identify the dominant organisational culture types in higher education and understand how the planned changes are aligned with the dominant cultures. The research was conducted in a large public university in Kosovo. The Competing Values Framework was used to assess the organisational culture. The study adopted a quantitative research approach. The sample consisted of 102 academic staff from a population of approximately 960. The data were collected using a standardised instrument (The Organisational Culture Assessment Instrument (OCAI)) to identify the dominant organisational culture based on four organisational culture types: clan, hierarchy, adhocracy, and market. The data related to the planned changes of the university were collected through document analysis. The research identified hierarchy and market cultures as the dominant cultures. The results also show that the dominant organisational cultures militate against the main planned changes. The findings confirm the relevance of the Competing Values Framework in assessing the organisational culture in higher education institutions and provide direction to academic leaders about how they can align their planned changes with the organisational culture to achieve better outcomes.

The next five papers deal with the influence of the Covid-19 pandemic on education in different countries, such as Indonesia, Lithuania, Turkey, Croatia, Germany and Slovenia.

The first in this part, by Mohamad Arief Rafsanjani, Heni Purwa Pamungkas, Nujmatul Laily and Andri Eko Prabowo, with the title 'Online Learning During the Covid-19 Pandemic: Readiness and Satisfaction among

Indonesian Students', examines the relationship between Indonesian students' readiness and satisfaction with online learning during the Covid-19 pandemic. It used an online questionnaire to reach 518 students as participants. Structural equation modelling (SEM) with SmartPLS software was utilised to examine the relationship between the variables. The finding indicated four dimensions of student readiness (online student attributes, time management, technical competencies, and online communication competencies) closely related to their satisfaction with online learning. The result provided an understanding of online learning satisfaction from students' readiness point of view during the Covid-19 pandemic in Indonesia. This study serves as a starting point for stakeholders (government and education institutions) in making future policies.

The next paper entitled 'Through Thick and Thin: Lower Secondary School Students' Barriers to Learning under Covid-19 Conditions' by Rasa Nedzinskaite-Maciuniene, Egle Stasiunaitiene and Gerda Simiene also presents the problem of the Covid-19 pandemic in education. This paper aims to reveal what learning barriers lower secondary school students face and how schools can minimise these barriers. A systematic review of the literature from two well-known databases, *EBSCO* and *ScienceDirect,* was performed to identify and determine the prevailing consistencies and gaps. The empirical study follows a qualitative research design as an explanatory case study. The data were collected through observations of online lessons, interviews with teachers and the school principal, and students' reflections. In addition, inductive thematic analysis was employed. The empirical results help to identify secondary school students' barriers to learning in terms of learning accessibility and technological literacy, planning and reflections on learning, self-regulated learning, active involvement, and emotional and psychological well-being. Furthermore, the study highlights how a school can minimise these barriers.

The third paper in the Covid-19 section of this Varia issue, entitled 'Distance Learning under the Covid-19 Conditions within Architectural Education' by Emel Unver and Asli Sungur, presents distance learning as one of the means of education used at various levels, from primary school to college. However, distance learning in architectural education differs from other disciplines, as architectural education is design-based with predominantly applied courses. As the spring semester of the 2019/20 academic year had to continue online due to the Covid-19 pandemic, and it remained uncertain whether or when face-to-face (FtF) education would start before the end of the term, the necessity to focus on online education was suddenly raised in architectural faculties. This study aims to start a discussion on how to proceed with online architectural education, focusing on quality, defining the fundamentals, and

proposing suggestions within this scope. To achieve this aim, research on the evaluation of the existing distance learning platforms of universities, the differences between the implementations of theoretical and applied courses, and the advantages and disadvantages of the process are made. For this purpose, a comprehensive literature review on universities that provide fully online, hybrid and conventional (FtF) education throughout the world is conducted, given, and discussed in the paper. After the research on ongoing processes, a case study is designed and conducted to determine the experiences, opinions and approaches of students and academic staff within the scope of emergency remote teaching. Together with the findings of the review and the case study, the challenges, strengths, and opportunities of online architectural education are discussed and evaluated with a focus on maintaining and raising the quality of the education. In conclusion, suggestions and proposals are presented to be applied and developed in architecture faculties' future online education experiences.

The fourth paper, 'Parents' Opinions about their Children's Distance Learning during the First Wave of the Covid-19 Pandemic' by Maja Drvodelić and Vlatka Domović, presents part of the results of an online survey investigating the opinions of 1,205 parents of primary school children on various aspects of distance education. The responses were analysed using the thematic analysis approach. The initial answers of parents regarding the positive and negative aspects of education during the lockdown were grouped into categories. The results indicate that distance education positively contributed to the development of children's self-regulated learning, providing greater parental support in learning and empowering children in using ICT. Parents emphasise positive changes in the quality of family relationships, which are partly the consequence of joint learning with their children and partly due to changes in the way of life during the lockdown. Negative aspects can be divided into two general categories, the first of which is linked to children (e.g., lack of support from the school, lack of children's interest in learning), while the second refers to the challenges faced by parents (e.g., fear of school failure, undertaking the double role of custodian and teacher). The findings suggest the need for developing recommendations to support parents and children in situations in which the teaching and learning process takes place in an online environment.

The last paper in this Varia issue also deals with the Covid-19 pandemic in education. It is entitled 'How the Covid-19 Pandemic was Experienced by Slovenian and German Adolescents with Specific Learning Difficulties' by Karmen Javornik, Marija Kavkler, Sven Lychatz and Milena Košak Babuder. In the study, the authors present findings on how Slovenian and German adolescents

with specific learning difficulties perceived and solved some of the challenges of distance learning. The data were collected with online questionnaires in Slovenian and German. Slovenian adolescents were statistically significantly more likely than German adolescents to mention problems with attention, the importance of multisensory learning, and the importance of being able to choose the time to learn, as well as psychosomatic problems. Slovenian adolescents had more experiences with praise from teachers during the pandemic, and they also mentioned more issues with the transition to distance learning and the use of information and communication technology. Younger adolescents had more parental help. Male adolescents were more likely to report that they did not have the right spatial conditions for learning. German adolescents spent more time chatting on social media and experienced less support for learning. Female adolescents were more likely to express fear of the pandemic and a lack of learning support, while male adolescents across the sample missed their peers more. Most of the respondents came from families in which the pandemic did not cause serious material and spatial problems, but German adolescents were statistically significantly less likely to feel these consequences. According to the respondents, both countries had similar spatial and material conditions.

This CEPSj Varia issue ends with two book reviews. The first presents the book by Ana Ž. Pešikan, *Learning in Educational Context: Psychology of Learning/Teaching*, and the second presents *Teaching in the Online Classroom. Surviving and thriving in the new normal* by Doug Lemov and The Teach Like a Champion Team.

Iztok Devetak

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The Inclusion of Differentiation in Literacy Lessons in the First and Second Grades of Slovenian Primary School

Jasna Švajger[1]

In the modern educational process, teachers adapt lessons to the student's individual abilities, prior knowledge, interests and social skills. The present study, whose aim is to examine the inclusion of differentiation in literacy lessons in the first and second grades of Slovenian primary schools, was carried out on a smaller scale (N = 79). It aims to determine the views of first- and second-grade primary school teachers on differentiation, and to find out how differentiation takes place in literacy lessons and which factors affect student performance in class. The results show that the inclusion of differentiation in literacy lessons is present in the entire initial literacy teaching process, and that Slovenian teachers undergo regular training and professional development courses in this area, thus contributing to the educational success of students and affecting their personal growth and development. Teachers estimate that the intertwining of individual abilities, family environment, engagement in co-curricular activities and well-developed social skills represents a key factor in student success. It was expected that internal differentiation would be more effective than external differentiation. Surprisingly, however, teachers report that heterogeneous groups do not enhance educational efficiency.

Keywords: differentiation, lessons, student, teacher, teaching literacy

1 Drska Primary School Novo mesto, Slovenia; jasna.svajger@os-drska.si.

Vključevanje diferenciacije pri pouku opismenjevanja v prvem in drugem razredu osnovne šole

Jasna Švajger

V sodobnem vzgojno-izobraževalnem procesu učitelji prilagajajo pouk učenčevim individualnim zmožnostim, predznanju, interesom in socialnim spretnostim. Raziskavo, katere namen je bil preučiti vključevanje diferenciacije pri pouku opismenjevanja v prvem in drugem razredu slovenske osnovne šole, smo izvedli v manjšem obsegu (N = 79). Cilji raziskave so bili ugotoviti, kakšna so stališča učiteljev, ki poučujejo v 1. in 2. razredu osnovne šole, do diferenciacije. Želeli smo izvedeti, kako poteka diferenciacija pri pouku opismenjevanja in kateri dejavniki vplivajo na uspešnost učencev pri pouku. Rezultati so pokazali, da je vključevanje diferenciacije v pouk opismenjevanja prisotno v celotnem procesu začetnega opismenjevanja in da se slovenski učitelji redno izobražujejo in izpopolnjujejo na tem področju ter s tem vplivajo na uspešnost učencev na učnem in osebnostnem področju. Učitelji ocenjujejo, da so med glavnimi dejavniki za uspešnost učencev preplet individualne zmožnosti, družinskega okolja, vključenosti učencev v šolsko dejavnost in razvite socialne spretnosti. Pričakovana je ugotovitev, da je notranja diferenciacija učinkovitejša od zunanje, presenetljiva pa je ugotovitev, da heterogene skupine po mnenju učiteljev ne prispevajo k večji učinkovitosti.

Ključne besede: diferenciacija, opismenjevanje, pouk, učenec, učitelj

Introduction

In 1996, the Primary School Act was adopted in Slovenia (Official Journal of the Republic of Slovenia, No. 81/06 – official consolidated text, 102/07, 107/10, 87/11, 40/12 – Financial Balance Act, 63/13 and 46/16 – Organisation and Financing of Education Act), which states in Article 40 that teachers are obliged to differentiate lessons and other types of organised work in accordance with the students' abilities. This applies to all primary school students (grades 1 to 9). Differentiation was introduced into teaching after the Second World War, in 1958, with the abolition of the dualistic system and the introduction of eight-year, and later nine-year, primary school (Blažič et al., 2003). In the 1970s, internal differentiation and individualisation also began to be implemented in practice, followed by flexible differentiation, which was introduced slightly later (Strmčnik, 2001).

The present article focuses on differentiation in literacy lessons in Slovenian schools. The Slovenian legislation stipulates that a child has to be enrolled in school in the calendar year in which s/he reaches the age of six. If a child is not yet mature enough to enter school, school enrolment may be delayed for one year based on a proposal submitted by parents or healthcare services (Official Journal of the Republic of Slovenia, No. 81/06 – official consolidated text, 102/07, 107/10, 87/11, 40/12 – Financial Balance Act, 63/13 and 46/16 – Organisation and Financing of Education Act).

Early literacy lessons – that is, learning the alphabet, acquisition of reading and writing techniques – take place in the first and second grades of primary school, whereas in the third grade, literacy lessons are focused on consolidation (Primary School Curriculum: Slovenian Language. Syllabus, 2018).

During the period of early literacy lessons, the foundations for further reading and writing lessons are laid. Due to the large differences between students upon entering school, it is essential for teachers to be aware of the importance of individualisation and differentiation, which should be used in class on a regular basis. This is precisely why the present article aims to analyse the situation in the field of differentiation in literacy lessons in Slovenian primary schools.

Overview of the literature on differentiation

Tomlinson (2004) defined differentiation as a teaching concept that ensures that the knowledge obtained by the student corresponds with the student's academic readiness or his/her ability level and interests, as well as the learning techniques that prove to be most suitable for the student. Differentiation is a

teaching concept that takes into account the talents and learning styles of the individual (Morgan, 2014). Differentiation techniques have been designed to satisfy students' needs, ensuring that students consequently develop certain virtues such as responsibility, cooperation and mutual assistance (Grimes & Stevens, 2009). Strmčnik (2001) defines differentiation as an organisational measure used by the teacher to guide and manage students in accordance with their specific differences. Students are split into homogeneous or heterogeneous learning groups, either temporary or permanent, in order to achieve better social and individual educational results by adapting objectives, content and didactic-methodical teaching concepts. Differentiation begins with the teacher's reflection on the content and teaching methods, as well as on the assessment of knowledge or progress and the student's understanding. During a working day, students can be split into different groups according to their needs and abilities.

In schools around the world, the Response to Intervention (RTI) differentiated approach has been introduced in classrooms. Within this approach, students are placed in three different tiers according to their abilities. Students placed in tier 1 are provided with high-quality lessons that are not differentiated; in tier 2, differentiated work takes place in small groups; and in tier 3, students acquire basic knowledge and need extra support and assistance (Jefferson at al., 2016). The latter is often provided outside the framework of regular classes, in the form of remedial classes, individual learning support and additional professional assistance (Pečjak & Potočnik, 2011). The teacher monitors the student's progress and identifies his/her interests, and when tier 1 knowledge has been reached, the student is moved to a higher level (tier), which will facilitate his/her further progress (Policastro et al., 2019).

Modern education aims to develop social, emotional, moral and intellectual abilities that allow students to become integrated into the community (Stropnik Kunič, 2012). In differentiated learning, the teacher has to take into account the differences between students that emerge as a result of their individual abilities, which include intellectual and verbal abilities, and due to their family environment and other factors, such as social skills and student participation in co-curricular activities (Marjanovič Umek, 2007). In Slovenian schools, migrant children and Roma children represented a special group of students. In their case, language barriers should be taken into account as the major obstacle faced by students in literacy learning (Klopčič, 2013; Knez, 2009).

Differentiation strategies in literacy lessons

The teacher's role is to adjust learning objectives in accordance with student abilities, and to create a learning environment that promotes students' progress and success (Waldron & McLeskey, 2001). Tomlinson (2003) includes differentiation in literacy lessons in three different ways: the use of reading materials at different levels; preparation of literacy centres containing activities with certain adjustments that are in line with the abilities and interests of students in a certain class; and the establishment of a centre where the teacher can work individually with a student who still has knowledge gaps.

Literacy teaching is defined in the literature as a process that involves all four communication skills, i.e., listening, speaking, reading and writing (Grginič, 2005; Haughbrook et al., 2017). Pečjak and Potočnik (2011) define it as a perceptual decoding process that includes: 1) letter recognition, resulting in the ability to visually distinguish and use support keys in decoding, which includes a grapho-phonetic or phonetic-letter key, a semantic key and a syntactic key; and 2) phonological awareness, which includes phonemic analysis and the ability to distinguish different phonemes.

The 2018 updated syllabus for the Slovenian language states that early literacy lessons take place individually, gradually and systematically throughout the first educational period (students aged 6 to 8), not only in Slovenian language but also in other subjects (Primary School Curriculum. Slovenian Language. Syllabus 2018).

The student population in primary school is very diverse, and the work therefore needs to be differentiated. However, it is precisely this diversity and the variety of student needs that may result in the same teaching strategies not suiting all students (Puzio et al., 2020). The teacher must therefore know his/her students well, formulate clear goals, take into account different student abilities, and plan the teaching materials according to the students' needs and interests. In order to accomplish the syllabus goals and objectives, the teacher must be flexible and take into account the level of difficulty of the teaching material and its compliance with the students' development level and abilities. In the light of the above, the International Reading Association identified differentiation as a core teaching competence (International Reading Association, 2000).

The work of Arquette (2007) contains some suggestions for the successful implementation of differentiation in literacy lessons that could be also appropriate in Slovenian classes. The author suggests that teachers should establish classroom centres for various activities that can increase student motivation and engagement in literacy learning. The Reading Centre should be

equipped with materials that are appealing to students (e.g., fairy tales, comics, picture books) and provide reading tasks (e.g., reading with a friend, writing down questions and unknown words). The Big Book Centre should be separated from the Reading Centre, as it will allow students to undertake tasks that apply to certain books only (e.g., reading aloud to a classmate). In the Listening Centre, students have access to listening devices and can listen to various texts. Post-listening activities should be well thought out and should keep students active and engaged. The Reading and Listening Centres should encourage students with reading difficulties to make progress using the applications that motivate them to read, including sound recordings with correct pronunciation, which is extremely beneficial for students. The Writing Centre is designed to improve students' writing skills. Students write letters to their classmates and can also practise writing on a computer. In the ABC/Word Study Centre, students work on letter recognition, practise writing, and develop visual and auditory perception.

Differentiation in literacy lessons in Slovenia

The Slovenian Language Syllabus (2018) states that students are to reach their goals through activities adapted to their age, their communicative, cognitive and imaginative abilities, and their experience and interests, which means that the teacher is obliged to plan lessons that use differentiated instruction (DI) to suit the student's distinct aptitudes. Differentiation has been present in the Slovenian school system for a long time. Research findings (Pečjak & Potočnik, 2011; Žalik, 1988) in the field of differentiation have shown that the teacher's role is to perceive students' abilities upon their entry into school; rather than viewing students as equal, the teacher should allow them to make progress at their own pace. Differentiation requires teachers to be flexible and is very time consuming. Consequently, teachers often wonder how to plan for differentiation successfully. It is important that the teacher takes into account the characteristics and abilities of the student that are necessary for the development of reading and writing skills, while also seeking to optimise the development of the student's abilities. In doing so, teachers are often confronted with factors that may hinder differentiation, e.g., the number of students in the class, restrictions and regulations, as well as fear that internal differentiation may turn into external differentiation. The most effective model of differentiation, also in Slovenia, is the RTI model (Pečjak & Potočnik, 2011), which separates teaching into three tiers:

In tier 1, the lessons are intended for all students. The lessons must be

of high quality and should involve differentiated instruction and opportunities to promote the development of students' interests. Within this tier, the teacher identifies students struggling with reading and writing gaps, who therefore need extra help. In this regard, it would be good for teachers to have a table with goals, where they would mark the status of each student with regard to the attainment of their objectives. Students may have problems in different areas and each student needs support and assistance (Yssel et al. 2014).

In tier 2, the lessons are held in smaller groups and student progress is monitored more often than in tier 1. The teacher uses student progress data to prepare an individualised programme for each student and to plan the transition from one tier to another. In tier 2, the teacher's duty is to assist students in performing tasks at the appropriate level of difficulty (Adams et al., 2012). Tier 2 work is limited to 30 minutes per day. It is performed in such a way that the teacher assists a group of students with reading and writing difficulties, while other groups are left to work on their tasks independently (Pečjak & Potočnik, 2011).

Tier 3 comprises students who need more support and assistance than tier 2 can offer. Lessons can be based on group work or individual work, depending on the students' needs.

Tier 3 lessons are even more systematic and focused on the individual student. This tier comprises students with serious reading and writing difficulties. Lessons are usually held outside regular school hours. The RTI differentiation model proves effective and suitable for students with reading and writing difficulties as well as for high-performing students (ibid.).

Research problem and research questions

The study aims to examine the inclusion of differentiation in the first and second grades of primary school in Slovenia. In her doctoral dissertation, Pečar (2018) deals in detail with differentiation in general as well as teachers' attitudes towards differentiation. This paper presents the results of a small-scale study concerned with differentiation in literacy lessons. The study aims to establish the attitudes of teachers of first- and second-grade students in primary school towards differentiation in literacy lessons. The aim was to find out the ways in which differentiation takes place in literacy lessons, and to determine which students are provided with differentiated learning. We examined which factors, according to teachers, affect students' performance in literacy lessons, how the inclusion of differentiation affects literacy lessons in various teaching strategies, and the correlation between the teacher's attitude towards differentiation in literacy lessons and its frequency in various teaching strategies.

The research questions were as follows:

1. How important is the inclusion of differentiation in literacy lessons for teachers, and which elements of differentiation do teachers consider important or unimportant?
2. Which differentiation methods are used by teachers in literacy lessons and which students are, with regard to their abilities, most frequently provided with differentiation?
3. In the opinion of teachers, which factors have the greatest impact on student performance in literacy lessons?
4. In the view of teachers, how does the inclusion of differentiation affect literacy lessons in various teaching strategies? What is the correlation between the teacher's attitude towards differentiation in literacy lessons and the frequency of differentiation in various teaching strategies?

Hypotheses:

H1: Teachers consider differentiation in literacy lessons to be very important, as it significantly affects the development of students' personality traits, social skills and learning abilities.

H2: In literacy lessons, teachers differentiate their work by using various teaching methods and strategies, and it is those students who deviate from the average population who are most commonly provided with differentiated instruction.

H3: According to teachers, student performance in literacy lessons is affected by students' intellectual abilities, their home environment and social skills.

H4: Teachers maintain that different teaching strategies significantly affect student performance, while also having a powerful impact on student motivation and self-confidence. The teacher's attitude towards differentiation affects the frequency of differentiation in various forms of teaching.

Method

Sample

Due to the fact that, according to the syllabus, early literacy lessons take place in the first and second grades of primary school, teachers who taught first- and second-grade students in the 2019/20 school year were invited to participate in the survey. A total of 79 participants[2] decided to take part in the

2 The results cannot be generalised to the entire population.

survey, of which 78 (98.7%) were female and 1 (1.3%) was male. Precisely 48 participants (60.8%) taught the first grade and 31 (39.2%) taught the second grade.

Participation in the research study was voluntary and the responses were anonymous.

Research instrument

For the purpose of this research study, an online questionnaire was created. It was based on the literature on the subject of differentiation, which had been previously studied and examined. The online survey questionnaire comprises questions that are used to either confirm or reject the previously stated hypotheses. The questionnaire contains the demographic data needed to present the sample and provide data analysis. The survey questionnaire encompasses five-point (the first part of the questionnaire) and three-point (the second part of the questionnaire) Likert scales, which are used to measure the respondents' opinions about a given subject. The table of the five-point scale assessing attitudes and opinions contains a variety of statements about the inclusion of differentiation in literacy lessons. The survey participants had to assess the relevance of each statement related to the implementation of their lessons.[3] The three-point-scale table also contains statements about the inclusion of differentiation in literacy lessons. The participants had to evaluate the extent to which each statement pertains to the implementation of their lessons.[4] The survey questionnaire filled out by the teachers also contains the following open-ended question: "Considering the results in your class, what are the positive effects of differentiation?"

Research design

On the basis of the literature and subsequent research questions, we prepared a survey questionnaire for teachers who taught the first or second grade of primary school in the 2019/20 school year. The survey questionnaire was distributed to teachers through an online portal in one phase only. The questionnaire was completed by 79 teachers. The data obtained was transferred from the web collector to Excel, and later to an SPSS document. The survey questionnaire showed a high degree of reliability, as the Cronbach's alpha coefficient is .92 for the first part of the questionnaire and .81 for the second part. The third part of the questionnaire comprised an open-ended question, which was analysed by means of a descriptive research method.

3 The set of statements covers a range of options that vary from one extreme to another: 1 – unimportant, 2 – of little importance, 3 – moderately important, 4 – important, 5 – very important.

4 The assessment of statements covers a range of options: 1 – agree, 2 – partly agree, 3 – disagree.

Results and Discussion

The survey results bring to light the responses to the research questions.

The first research question aims to determine the views of first- and second-grade primary school teachers on differentiation in literacy lessons. Their responses were obtained in the first part of the questionnaire, where they assessed the importance of various statements, as well as in the third part of the questionnaire, where the respondents had to provide answers to an open-ended question on the positive effects of differentiation.

Data analysis shows that the teachers regard differentiation in literacy lessons as very important (f = 43; 54.4%) or important (f = 31; 39.2%), which is also confirmed by the data for the statement regarding the time spent on preparing differentiation strategies in literacy lessons. The majority of the teachers answered that they spend a lot of time on differentiation (f = 36; 45.6%) or that this statement is at least partly true (f = 41; 51.9%). It can therefore be concluded that particular attention is given to this teaching technique by the teachers.

The third part of the questionnaire contains an open-ended question on the positive effects of differentiation in literacy lessons. The results show that most teachers focus their attention on the individual student, while the positive impact of differentiation on students represents a great professional success for teachers. This demonstrates that there is a connection between students and teachers, which is consistent with the findings of Tomlinson (2003), who claims that teacher-student relationships play a key role in the planning and implementation of differentiated teaching.

When asked about the positive effects of differentiation, most of the respondents stated that students' self-esteem is boosted during differentiated literacy lessons. As students progress from lower to higher taxonomic task levels, they gain a sense of success and accomplishment.

The survey questionnaire shows that teachers consider the element of differentiation to be very important (M = 4.58). The teachers surveyed believe that students are more motivated to work if literacy lessons are based on differentiation and if they are performed in a dynamic way, characterised by group work and subject content that is consistent with students' abilities, interests and needs. The first part of the questionnaire examines the importance of student motivation regarding literacy lessons, and the third part explores the situation in the respondents' classes. It was established that the correlation between the results of the survey statements is statistically significant (p = 0.038), which suggests that the teacher should ensure additional student motivation in literacy lessons, providing s/he finds it important.

The vast majority of teachers assessed the adaptation of lessons to students' abilities as important (the first part of the survey questionnaire) (M = 4.54). They also assessed as important the fulfilment of student needs (M = 4.35) and the adjustment of lessons to student interests (M = 3.67).

The surveyed teachers devote a great deal of attention to the didactic-methodological way of teaching, which they consider very important in their work (M = 4.41). They also listed some interesting teaching strategies that may increase student interest in reading and writing: the use of the phonomimic method of teaching alphabet letters, learning letters through songs and rhymes, and learning by movement. When executing these activities, the teachers are autonomous and they find it important to adjust the learning content (M = 3.99) and goals (M = 4.00) in literacy lessons for the benefit of their students. The teachers also listed some other elements of differentiation that they consider important in literacy lessons: the development of responsibility (M = 32) and independence (M = 4.48), and encouraging students to help and assist each other (M = 4.44). The teachers stated that all of these elements represent a positive outcome of differentiation in literacy lessons in their teaching practice.

The second research question was intended to check which differentiation methods are used in literacy lessons in practice, and which students are most frequently provided with a differentiated teaching approach.

The response to the first research question exposed some of the teaching methods used by teachers while giving lessons (the phonomimic method, learning through rhymes and songs, learning by movement). In addition to teaching methods, we were also interested in teaching strategies used in differentiated literacy lessons. We wanted to find out which teaching strategies are most frequently used by teachers in literacy lessons.

Table 1

Teaching strategies most frequently used by teachers in literacy lessons

Statements	True		Partly true		Not true		Total	
	f	f %	f	f %	f	f %	f	f %
In literacy lessons, I most frequently use the frontal teaching method.	3	3.8	51	64.6	25	31.6	79	100.0
My literacy lessons are most frequently based on group work activities, with all groups having the same task.	0	0.0	46	58.2	33	41.8	79	100.0
My literacy lessons are most frequently based on group work activities, with each group working on tasks that are adjusted to the students' abilities.	28	35.4	50	63.3	1	1.3	79	100.0

The results presented in Table 1 illustrate that, in most cases, literacy lessons are rather diverse. The teachers use the following three types of teaching strategies in class: frontal teaching, groupwork with all groups doing the same tasks, and groupwork where the tasks are adjusted to individual students and their abilities. Each of these strategies plays an important role in the individual stages of literacy lessons, and it is important not to favour one strategy over others: they need to be given equal importance and should be intertwined.

Only 3 teachers (3.8%) most frequently use the frontal teaching strategy in literacy classes, while this is partly true for 51 teachers (64.6%). Some teachers stated that they perform the frontal teaching strategy mainly in the introductory part of the lesson – e.g., singing a song related to a certain letter of the alphabet – and in the final part, when they revise the subject matter covered during the lesson. The results show that group work with all groups working on the same task is the least frequently used teaching strategy in literacy lessons. The respondents stated in their answers that this teaching strategy is used primarily to assess and evaluate their students' existing knowledge. The activities that the majority of the teachers (28 respondents or 35.4%) tend to use most frequently are group work activities adapted to the students' abilities. With the exception of one teacher, the other respondents evaluated this statement as partly true. The teachers maintain that the group work method is the most effective in the consolidation stage, when reading and writing skills are reinforced. By means of the listed teaching methods, differentiation can be performed in all three tiers of the RTI model. Tier 3 can be additionally strengthened by using forms of assistance outside regular school hours, such as remedial classes (for low-performing students) and supplementary lessons (for high-performing students). Are literacy lessons included in this type of extra help and assistance as well?

Table 2

The inclusion of literacy lessons in remedial and supplementary classes

Statement	True		Partly true		Not true		Total	
	f	f %	f	f %	f	f %	f	f %
I often teach literacy in remedial classes.	45	57.0	21	26.6	13	16.5	79	100.0
I often teach literacy in supplementary lessons.	25	31.6	33	41.8	21	26.6	79	100.0

Table 2 shows that academically weak students are more likely to be placed in tier 3. A study by Jožef (2019) explains why teachers do not focus so much on developing communication skills in supplementary classes,

demonstrating that teachers conducting supplementary classes mostly focus on preparing their students for competitions and therefore seek to improve student performance in mathematics. We are very critical of this argument, as the development of communication skills represents the foundation for developing skills in other areas.

Table 3

Students who are, with regard to their abilities, provided with differentiated instruction

Statement	True		Partly true		Not true		Total	
	f	f %	f	f %	f	f %	f	f %
Academically weak students	60	75.9	19	24.1	0	.0	79	100.0
High-performing students	55	69.6	24	30.4	0	.0	79	100.0
Average students	49	62.0	30	38.0	0	.0	79	100.0

Table 3 shows that differentiation is used in literacy lessons by all teachers, who, at least partly, employ differentiated instructional strategies by devoting more attention to academically weak students. As expected, teachers consider differentiation especially important in the case of academically weak students, as these students would not accomplish their objectives without additional support and assistance. However, the results show that teachers use differentiation in other groups as well, since none of the teachers opted for the answer *"Not true"* for any of the groups.

Nevertheless, it would have been preferable for the response *"True"* to score better (to achieve a higher percentage) in the case of high-performing and average students, since the main goal of differentiation is to create an environment in which student abilities are optimally developed under the teacher's guidance. In the modern school, we should not only strive to gain basic knowledge, but to maximise the progress of each individual student.

The third research question aims to determine which factors, according to teachers, have the most significant effect on student performance in literacy lessons: individual abilities (intellectual and speaking skills), family environment, student engagement in co-curricular activities or their social skills.

The survey questionnaire contains questions regarding these factors, along with corresponding statements and a three-point attitude scale to measure the teachers' opinions.

Table 4
Factors that, in the teachers' opinion, have the greatest impact on student performance in literacy lessons.

	M	*SD*	*N*
The impact of individual abilities	1.52	.503	79
The impact of family environment	1.76	.430	79
The impact of social skills	2.05	.658	79
The impact of student engagement in co-curricular activities	1.81	.482	79

As maintained by the teachers (Table 4), it is the individual abilities of students, which include, inter alia, intellectual and speaking abilities, that have the most significant impact on student performance. According to Musk (2014), these two types of ability represent a precondition for achievements in the field of mental abilities, independent of physical and psychomotor skills. As reported by the teachers, it is the following factors that significantly affect student performance (in order of importance): family environment, student engagement in co-curricular activities, and students' social skills (M = 2.05), which, according to Rozman (2006), include cooperation, listening, discussions, empathy, manner of expression, having consideration for oneself and others, conflict resolution, and the ability to use one's own internal resources.

All of the claims about various types of impact on student performance in literacy lessons were assessed by the teachers as *"partly true"*, which can be explained by the fact that the influences are intertwined and mutually affect each other: if one of the influences becomes stronger, the others become stronger as well.

The purpose of the fourth research question was to establish the effects (success, motivation, self-confidence) that, according to the teachers, differentiation has in various teaching strategies (frontal teaching, groupwork – homogeneous grouping, groupwork – heterogeneous grouping, remedial classes and supplementary lessons). We also wanted to gather the teachers' opinions on the importance of integrating differentiation in literacy lessons using various teaching strategies.

The results related to the effects of differentiation in various teaching strategies showed that, in the teachers' opinion, frontal teaching does not affect the students' performance, motivation and self-confidence. In homogenous groups, students deal with the same or different tasks that help them achieve common learning goals, while at the same time having an opportunity to

cooperate and, with regard to their abilities, boost their progress. In the teachers' view, this teaching strategy affects student performance but does not have an impact on their motivation and self-confidence. According to the teachers, activities in heterogeneous groups, in which students are assigned either the same or different tasks, affect neither student performance nor the motivation and self-confidence of students. This result is rather surprising, as more able students can help academically weaker students in heterogeneous groups, which could increase the motivation of all group members, both those who give and those who receive help. We also wanted to find out more about the teachers' views on the importance of external differentiation in the form of remedial classes and supplementary lessons. The teachers believe that remedial classes do not significantly affect students' performance, motivation and self-esteem. As a matter of fact, the teachers report a positive effect of remedial classes on student performance and motivation, yet they also claim that remedial classes do not improve students' self-esteem. While the positive impact on student performance and motivation can be attributed to the individualised teaching approach, the absence of a positive effect on student self-esteem can be linked to prejudice about remedial classes, which are offered to academically weak students. In supplementary lessons, teachers set higher-order learning objectives for their advanced students (in accordance with Bloom's Taxonomy Levels of Learning), which promotes the development of their mental processes and consequently brings about students' progress and success. Students involved in co-curricular activities usually show interest in additional learning activities and are motivated to work. A link between the teachers' assessment of the importance of integrating differentiation in literacy lessons and the organisation of different teaching strategies was established. Statistically significant results were identified in the following three cases: the assessment of the importance of differentiation and frontal teaching ($p = 0.000$), the assessment of the importance of differentiation and groupwork with students working on the same tasks ($p = 0.003$), and the assessment of the importance of differentiation and groupwork with students tackling different tasks ($p = 0.000$). There are no statistically significant links between the teachers' assessment of the importance of integrating differentiation and remedial classes and supplementary lessons. The results are as expected, since all three types teaching strategy – one frontal and two groupwork strategies – take place during regular classes with students of different ability levels learning together in heterogeneous groups. In this process, the teacher should take into account the students' abilities and strive for the progress of each individual student. Remedial classes and supplementary lessons each comprise students with similar abilities, and this results in

the formation of homogeneous groups, which means that the teaching strategy itself is differentiated.

Conclusion

The research presented in this paper is based primarily on teachers' views obtained by a survey questionnaire. The results would most likely have be different if lesson observations had been conducted, which would also have allowed for greater objectivity.

The research results demonstrate that first- and second-grade primary school teachers devote a lot of their time and attention to differentiation in literacy lessons. When planning such work in the classroom, teachers devote particular attention to the positive effects of differentiation on students. Teachers believe that in differentiated literacy lessons, students boost their self-esteem due to the fact that they gain a sense of accomplishment and success by completing the easiest tasks first and then working their way up to more demanding tasks. Teachers maintain that students make greater progress and are more motivated if lessons are adapted to students' abilities, interests and needs. Moreover, students are more likely to become actively engaged in dynamic lessons with a variety of teaching methods, and if reading and writing skills are practised through movement, singing and reciting. At the same time, teachers often adapt the learning objectives and literacy content to their students. By means of differentiation, teachers also contribute to the development of students' personal traits, especially independence and a sense of responsibility, while students are also encouraged to help their peers and support each other. In the classroom, however, differentiation alone does not fully meet students' needs. According to differentiation principles, one should also take into account individualisation or the adaptation of the learning process to each individual student (Pečar, 2018). Research by Pečar (2018) showed that teachers believe it is essential for them to determine students' prior knowledge and to link the subject matter with students' interests if they want to ensure successful adaptation of their lessons. In this way, student motivation is increased and they are encouraged to persevere in the process. Differentiation in literacy lessons is organised in various ways: frontal teaching, groupwork with students working on the same task, and groupwork with students doing different tasks depending on their abilities. All of the survey participants use these teaching strategies, which are often intertwined. Teachers select their teaching strategies according to the stage of student learning: the introductory stage, where students are introduced to the new topic; the revision and consolidation stage;

and the knowledge assessment stage. Although literacy lessons are carried out in remedial classes and supplementary lessons, the research data suggests that little attention is paid to tier 3 in these classes. During literacy lessons, most students are provided with differentiation, but those students who stand out – either as high-performing or low-performing students – are more likely to be provided with differentiation. Teachers divide students into groups that are either heterogeneous or homogeneous. Students in heterogeneous groups are selected either randomly or systematically, whereas a homogeneous grouping of students is planned by the teacher in advance. The purpose of groupwork is to promote collaborative learning that helps develop students' communication skills, in our case reading and writing (Rot Vrhovec, 2015). In her study, Pečar (2018) also highlights adjustments with regard to the number of tasks, as well as teaching methods and the learning environment. It is interesting to note that teachers adapt their lessons mainly in mathematics and Slovenian, while lessons are adapted to a lesser extent in other subjects.

According to teachers, student performance is affected by four factors: students' individual abilities, their family environment, student engagement in co-curricular activities, and students' social skills. Although teachers maintain that student performance is mainly affected by individual abilities, none of the other three parameters deviates greatly from the leading one, which means that all of the parameters are interdependent and affect each other. Research by Pečar (2018) demonstrates that, according to teachers, students' performance is mostly affected by their family environment, followed by students' active engagement in co-curricular activities. It is extremely important to develop the abilities of the individual student as optimally as possible. Slovenian primary school teachers who teach first- and second-grade students are well aware of the importance of this principle, and they take it into account in their literacy lessons. Research has shown that academically weak students and gifted students are provided with differentiation to a greater extent than average students. The findings of the present paper are in line with those outlined in research by Pečar (2018), who also established that teaching is adapted mainly to high-performing and low-performing students. Pečar maintains that teachers are in favour of differentiation, but they often encounter obstacles such as state regulation of class size, a lack of time for differentiation, curriculum overload, discipline problems, and students' lack of interest. Rot Vrhovec (2020) points out, among other things, the importance of adapting lessons to foreign students, but further research would be required on this topic.

References

Adams, C. M., Yssel, N., & Anwiler, H. (2012). Twice exceptional gifted learners and RTL: Targeting both sides of the same coin. In M. R. Coleman & S. K. Johnsen (Eds.), *Implementing RTL with gifted students: Service models, trends, and issues* (pp. 229–252). Prufrock.

Arquette, C. (2007). Multiple activity literacy centers: Promoting choice and learning differentiation. *Illinois Reading Council Journal*, 35(3), 3–9.

Grginič, M. (2005). *Porajajoča se pismenost* [Emerging literacy]. Izolit.

Grimes, K. J., & Stevens, D. D. (2009). Glass, bug, mud. *Phi Delta Kappan, 90*(9), 677–80.

Haughbrook, R., Hart, S. Schatschneider, C., & Taylor, J. (2017). Genetic and environmental influences on early literacy skills across school grade contexts. *Developmental Science*, *20*(5), 1–12.

International Reading Association. (2000). *Making a difference means making it different: Honouring children's rights to excellent reading instruction*. In M. Block, C. Borsheim-Black & T. Hicks (Eds.), *Michigan reading journal* (pp. 6–7). Michigan Reading Association.

Jefferson, R. E., Grant, C. E., & Sander, J. B. (2017). Effects of tier 1 differentiation and reading intervention on reading fluency, comprehension, and high stakes measures. *Reading Psychology*, *38*(1), 97–124.

Jožef, J. (2019). Razvijanje govora v prvem vzgojno-izobraževalnem obdobju osnovne šole. [Speech development in the initial stages of primary school education]. In K. Podbevšek & N. Žavbi (Eds.), *Govor v pedagoški praksi* (pp. 49–56). Znanstvena založba Filozofske fakultete.

Klopčič, V. (2013). The paths of Roma language. In A. Žele (Ed.), *Obdobja 32 symposium: The social functionality of language (aspects, criteria, definitions)* (pp. 213–218). Centre for Slovene as a Second and Foreign Language.

Knez, M. (2009). Linguistic inclusion (and exclusion) of immigrant children. In M. Stabej (Ed.), *Obdobja 28 symposium: The infrastructure of Slovene and Slovene language studies*. (pp. 197–202). Centre for Slovene as a Second and Foreign Language.

Marjanovič Umek, L. (2007). Diferenciacija v šoli; enako ali različno za različne otroke [Differentiation in school: Same or different for different children]. *Sodobna pedagogika*, *58* (2), 108–127.

Morgan, H. (2014). Maximizing student success with differentiated learning. *Clearing House*, *87*(1), 34–38.

Musek, J. (2014). *Psihološki temelji družbe prihodnosti* [The psychological foundations of the society of the future]. Inštitut za etiko in vrednote Jože Trontelj.

Pečar, M. (2018). *Izkušnje in stališča učiteljev o prilagajanju pouka predznanju in interesom učencev* [Teachers' experience and views on adapting lessons to students' prior knowledge and interests] (Doctoral dissertation). Univerza v Ljubljani, Pedagoška fakulteta.

Pečjak, S., & Potočnik, N. (2011). Razvoj zgodnje pismenosti ter individualizacija in diferenciacija dela v prvem razredu osnovne šole [Early literacy development, individualisation and work differentiation in the first class of primary school]. *Razvoj komunikacijskih zmožnosti v vrtcu in*

začetno opismenjevanje. Zavod RS za šolstvo.

Policastro, M. M., Mazeski, D., & Wach, N. (2019). Getting to know our students: The heart of differentiation in the balanced literacy classroom. *Illinois Reading Council Journal*, *47*(4), 19–28.

Poznanovič Jezeršek, M., Cestnik, M., Čuden, M., Gomivnik Thuma, V., Honzak, M., Križaj Ortar, M., Rosc Leskovec, D., Žveglič, M., & Ahačič, K. (2019). *Učni načrt. Program osnovna šola. Slovenščina.* [School curriculum. Primary school education programme. Slovenian language]. Ministrstvo za šolstvo in šport: Zavod Republike Slovenije za šolstvo.

Puzio, K., Colby, G. T., & Algeo-Nichols, D. (2020). Differentiated literacy instruction: Boondoggle or best practice? *Review of Educational Research*, *90*(4), 459–498.

Rot Vrhovec, A. (2015). Collaborative learning strategies in the linguistic part of Slovene language lessons in primary school. *Center for Educational Policy Studies Journal*, *5*(3), 156–181.

Rot Vrhovec, A. (2020). *Teaching students whose first language is not Slovenian.* Faculty of Education.

Rozman, U. (2006). *Trening socialnih veščin* [Social skill training]. Educa.

Strmčnik, F. (2001). *Didaktika. Osrednje didaktične teme* [Didactics. Central didactic themes]. Znanstveni Inštitut Filozofske Fakultete.

Stropnik Kunič, N. (2012). Individualization and differentiation as a model of new communication in the learning process. *Informatologia*, *45*(1), 44–52.

Tomlinson, C. A. (2003). *Fulfilling the promise of the differentiated classroom: Strategies and tools for responsive teaching*. Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2004). Sharing responsibility for differentiating instruction. *Roeper Review*, *26*(4), 188–189.

Waldon, N., & McLeskey, J. (2001). Nancy Waldron and James McLeskey: Helping schools include all learners. *Sage Journals*, *36*(3), 175–181.

Yssel, N., Adams, C., & Clarke, L. S. (2014). Applying an RTI model for students with learning disabilities who are gifted. *Teaching Exceptional Children*, *46*(3), 42–52.

Zakon o osnovni šoli [Primary School Act]. (2006). Uradni list RS [Official Journal of the Republic of Slovenia] št. 81/06 – uradno prečiščeno besedilo [official consolidated text], 102/07, 107/10, 87/11, 40/12 – ZUJF, 63/13 in 46/16 – ZOFVI-L).

Žalik, L. (1988). Diferenciacija in individualizacija dela v prvem razredu [Differentiation and individualisation of work in the first class of primary school]. *Vzgoja in izobraževanje*, *19*(3), 28–33.

Biographical note

Jasna Švajger is a Primary School teacher at OŠ Drska in Novo mesto. Currently she is doing her PhD at the Faculty of Education, University of Ljubljana, majoring in teacher education. Her research interests include development of teaching practice and teacher education in the area of special theoretical and applied didactics of the Slovene language. Her research work is mainly focused on modern didactic approaches to teaching children in the first three grades of primary school.

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College Attendance among Low-Income Youth: Explaining Differences across Wisconsin High Schools

Christian Michael Smith*[1] and Noah Hirschl[2]

Bolstering low-income students' postsecondary participation is important to remediate these students' disadvantages and to improve society's overall level of education. Recent research has demonstrated that secondary schools vary considerably in their tendencies to send students to postsecondary education, but existing research has not systematically identified the school characteristics that explain this variation. Identifying these characteristics can help improve low-income students' postsecondary outcomes. We identify relevant characteristics using population-level data from Wisconsin, a mid-size state in the United States. We first show that Wisconsin's income-based disparities in postsecondary participation are wide, even net of academic achievement. Next, we show that several geographic characteristics of schools help explain between-secondary school variation in low-income students' postsecondary outcomes. Finally, we test whether a dense set of school organisational features explain any remaining variation. We find that these features explain virtually no variation in secondary schools' tendencies to send low-income students to postsecondary education.

Keywords: college attendance, educational inequality, geography, low-income students, school effects

1 *Corresponding Author. University of California Merced, United States of America; csmith97@ucmerced.edu.

2 Doctoral Candidate, University of Wisconsin-Madison, United States of America.

Obiskovanje srednjih šol med mladimi z nizkimi dohodki: pojasnjevanje razlik med srednjimi šolami v Wisconsinu

Christian Michael Smith in Noah Hirschl

Spodbujanje udeležbe dijakov z nizkimi dohodki v posekundarnem izobraževanju je pomembno za odpravo pomanjkljivosti teh dijakov in izboljšanje splošne ravni izobrazbe v družbi. Nedavne raziskave so pokazale, da se srednje šole precej razlikujejo v svojih težnjah po vključevanju dijakov v posekundarno izobraževanje, a obstoječe raziskave niso sistematično opredelile značilnosti šol, ki bi pojasnile te razlike. Opredelitev teh značilnosti lahko pomaga izboljšati dosežke dijakov z nizkimi dohodki v posekundarnem izobraževanju. Ustrezne značilnosti smo opredelili s podatki na ravni prebivalstva iz Wisconsina, srednje velike zvezne države v Združenih državah Amerike. Najprej smo pokazali, da so razlike med učenci v Wisconsinu glede na dohodek pri udeležbi v posekundarnem izobraževanju velike, tudi če ne upoštevamo učnih dosežkov. Nato smo pokazali, da več geografskih značilnosti šol pomaga pojasniti razlike med srednjimi šolami v rezultatih učencev z nizkimi dohodki v posekundarnem izobraževanju. Nazadnje smo preverili, ali gost nabor organizacijskih značilnosti šol pojasnjuje preostale razlike. Ugotovili smo, da te značilnosti ne pojasnjujejo skoraj nobenih razlik v težnjah srednjih šol, da bi dijake z nizkimi dohodki vključile v posekundarno izobraževanje.

Ključne besede: obiskovanje srednjih šol, neenakost v izobraževanju, geografija, učenci z nizkimi dohodki, učinki šole

Introduction

In the U.S. at large, low-income youth are far less likely to participate in postsecondary education than their more economically advantaged counterparts. A low-income individual is less likely to attend postsecondary education (*college* in the U.S.), especially a baccalaureate college,[3] than even economically advantaged individuals with the same level of academic achievement (Belley & Lochner, 2007). At minimum, this disparity is important because baccalaureate college attendance is associated with a hefty wage premium. The value of attending a baccalaureate college for the typical secondary school graduate is estimated to be between $85,000 and $300,000 over the life course compared to not attending, even adjusting for the increasing costs of attendance (Webber, 2016). Disparities in baccalaureate college attendance help keep society stratified, with low-income youth becoming low-income adults and high-income youth becoming high-income adults. Postsecondary participation confers other private benefits such as health (Cutler & Lleras-Muney, 2006) and job satisfaction (Baum et al., 2013), further suggesting that baccalaureate college attendance disparities help stratify desired outcomes based on one's socioeconomic origins. Moreover, given that increases in statewide educational attainment bring *public* rewards like increased tax revenue and civic involvement (Baum et al., 2013), all of society stands to benefit when more low-income youth participate in postsecondary education.

A wealth of work has shed light on the important role of primary and secondary schools in boosting low-income students' test scores, but only recently have scholars begun to study the contribution of secondary schools (*high schools* in the U.S.) to youths' postsecondary outcomes (Jennings et al., 2015). Using data from Massachusetts and Texas, Jennings and colleagues argue that differences between schools are even more important for college attendance than they are for improving standardised test scores. While their study demonstrates that high schools vary in the extent to which they send students to college, knowledge is sparse on what specific school-level characteristics explain this variation, especially for low-income students. Existing U.S. studies use small-scale data or focus on a single school characteristic (e.g., Hill, 2008; Turley, 2009). To date, the most thorough evidence in the U.S. comes from Engberg and Wolniak (2010), who study

3 Throughout, *baccalaureate college* refers to an institution of postsecondary education that confers bachelor's degrees. Bachelor's degree-granting programmes in the U.S. are typically designed to take four years to complete and are required for someone to enter graduate and professional programmes that grant master's and doctoral degrees. In contrast, associate's degree-granting programmes in the U.S. are typically designed to take two years to complete and do not open doors to graduate or professional degree programmes. We use *two-year college* to denote institutions that only grant associate's degrees and vocational certificates. Compared to baccalaureate colleges, two-year colleges have appreciably lower rates of return in the U.S.

high school-level predictors of postsecondary participation, yielding particularly rich findings related to school composition. We build on their study by examining the role of previously unmeasured geographic context characteristics as well as new school organisational features that administrative data allow one to measure.

We are centrally interested in what explains variation in high schools' effects on low-income students' baccalaureate college attendance. To determine which types of schools are more successful in sending low-income students to baccalaureate colleges, our study uses a relatively dense set of student-level and school-level characteristics. We draw these data from the population of Wisconsin public school students who entered the ninth grade for the first time between the 2006/07 and 2011/12 school years. Our research questions are as follows:

1. How large are economic disparities in baccalaureate college attendance in Wisconsin?
2. How much variation is there between high schools in the share of their low-income students who attend baccalaureate colleges, controlling for student characteristics?
3. Which high school characteristics explain this between-school variation?

School effects research: Canon and recent advances

The *Equality of Educational Opportunity* study (Coleman et al., 1966) was the springboard for decades of sociological inquiry into how much schools differ in their effectiveness, even inspiring a focus issue of this journal (Sardoč & Gaber, 2016). Coleman and his colleagues found that the majority of variance in academic achievement was found within rather than between schools, implying that factors outside school, such as students' racial and socioeconomic backgrounds, drove academic outcomes, leaving only a small amount of room for schools to move the needle. Using more sophisticated methods, more recent research has presented a comparatively sanguine picture of schools' capacities to boost student achievement, though students' individual characteristics are still responsible for more of the variance in academic achievement than are schools (Borman & Dowling, 2010; Bryk & Schneider, 2002).

Schools may differentially influence more than only academic achievement, though. Increasingly, education researchers are investigating schools' differential effects on adult outcomes like dropout rates, criminal activity, educational attainment and earnings. As a result, the field is learning that high schools can have large effects on non-achievement outcomes like postsecondary behaviour, while having relatively meagre effects on student's academic achievement. Cullen et al. (2006) study students in Chicago, Illinois and find that the high school one attends has a substantial impact on intentions to attend

college. Deming and colleagues (2014) study students in Charlotte, North Carolina and find that one's high school matters in determining whether one actually participates in postsecondary education. Research using national samples in the U.S. (Altonji & Mansfield, 2011; Rumberger & Palardy, 2005), national data in Wales (Taylor et al., 2018), and statewide databases in the U.S. (Jennings et al., 2015) has found variation across schools of similar magnitude. Jennings and colleagues (2015) go further to argue that the variance in school effects is larger for baccalaureate college attendance than for exam scores.

Factors that may explain school effects: Theory and evidence

While research has shown that where students attend school matters for whether they attend college, this new knowledge has generated a black box problem: in terms of *explaining* between-school variation in students' college outcomes, the field of education has tested only a sparse set of school characteristics. Knowing which school characteristics explain this variation is useful for identifying the best ways to boost students' college attendance. Below, we discuss several geographic and school organisational characteristics, reviewing theory and evidence on whether the characteristic should affect college attendance.

Geographic context

Education scholars are increasingly noting the role that geography plays in college attendance (Hillman, 2016; Turley, 2009), school effects (Geppert et al., 2012) and the intersection of the two (Hirschl & Smith, 2020). Geppert et al. (2012) advise researchers to consider how geographic inequalities might drive between-school inequalities in student outcomes. Below, we heed this advice by considering several geographic factors.

Distance to institutions of postsecondary education may be one geographic characteristic that helps explain between-school variation in students' college outcomes. In general, evidence suggests that nearby institutions pull students to attend. Thus, students close to baccalaureate colleges are more likely to attend a baccalaureate college (Turley, 2009) and students close to two-year colleges are less likely to attend a baccalaureate college because they have higher probabilities of attending two-year colleges instead (Alm & Winters, 2009). Although these associations may be spurious, studies exploiting new university openings in Canada (Frenette, 2009) and California (Lapid, 2017) suggest the relationships are causal. Theoretical explanations for a causal effect include the possibility that local colleges allow students to attend college more affordably and conveniently while remaining close to friends and family, and the possibility that local colleges instil a college-positive culture.

The local demographic composition of an area could also help explain between-school variation in students' college outcomes. Of particular importance may be the proportion of adults in the area who have bachelor's degrees, for which there is strong evidence of an effect on youths' later postsecondary outcomes (Tach et al., 2016). Theoretically, students growing up around many college-educated adults will likely have more college-educated role models who demonstrate a norm of postsecondary participation. Plausibly, these students will also have more sources of information about the process of applying to institutions, obtaining financial aid and choosing an institution.

Finally, rurality is important to consider. More often than urban and suburban areas, rural areas are characterised by low parental expectations for children's educational attainment (Roscigno & Crowley, 2001) and a predominance of blue-collar work that does not require bachelor's degrees (Roscigno et al., 2006). These factors likely decrease students' motivation to attend baccalaureate colleges. Empirical evidence confirms that rural students are disadvantaged with respect to postsecondary outcomes (Byun et al., 2012).

School organisational features

Beyond geographic context, school organisational features are important from a policy perspective because they are more manipulable than geography characteristics. Among these school organisational features are student-counsellor ratios. There are significant disparities across high schools in access to counsellors who can provide key college information and encouragement, particularly for students whose parents have little or no experience with postsecondary education (McDonough & Calderone, 2006; Wolniak & Engberg, 2007). Ethnographic accounts emphasise the extent to which school counsellors can succeed or fail in providing key information about deadlines and requirements (McDonough, 1997; Radford, 2013). Quantitative studies have found evidence that school personnel especially influence students from poor families or whose parents did not attend college (Bettinger et al., 2012; Castleman & Page, 2015; Engberg & Gilbert, 2014). These results suggest, but do not prove, that small student-counsellor ratios may improve students' college outcomes by allowing counsellors to focus their positive efforts on a smaller number of students.

Per-pupil school expenditures may also matter. While early studies cast doubt on the importance of school spending for students' educational outcomes (Coleman et al., 1966; Hanushek, 1989), more recent studies have shown significant effects of per-pupil spending on students' ultimate educational attainment. Johnson (2015) finds that students benefit from increased Title 1 funding, and Jackson, Johnson and Persico (2015) exploit decades of school finance reforms

to identify positive effects of increased school spending. Both studies find that the effects are greatest among students in poverty.

Rigorous coursework like Advanced Placement (AP) and International Baccalaureate (IB) classes may also help explain between-high school variation. Early work comparing public schools to private and Catholic schools emphasises the importance of high academic standards and broad access to college-track classes in explaining the differences in achievement and later baccalaureate college enrolment rates between sectors (Hoffer et al., 1985). Students who enrol in advanced classes are more likely to attend and succeed in postsecondary education (Long et al., 2012). Moreover, variation across high schools in the availability of high-level coursework like AP classes predicts attendance at both selective colleges and baccalaureate colleges generally (Klugman, 2012).

In the same vein, there is theoretical reason to believe that internally segregated high schools may discourage low-income students from attending baccalaureate colleges. If advanced coursework is beneficial, then it is not enough simply to offer these courses; low-income students must *take* the courses in order for them to benefit. Since low-income students are far less likely than higher-income students to take advanced courses, even among students with similar academic achievement (Conger et al., 2009), schools with more between-classroom economic segregation are probably schools where low-income students take these advanced courses especially rarely. In contrast, schools where low-income and high-income students occupy the same classrooms are probably schools where low-income students have equal opportunity to take advanced courses.

Method

Data

Our data come from Wisconsin, a medium-population state in the Midwestern region of the United States. Wisconsin is a valuable case for study because, while urban school districts have received disproportionate attention in research on school effectiveness for postsecondary outcomes, Wisconsin has many students in both rural areas and high-density metropolitan areas. Furthermore, Wisconsin is not only a typical state in terms of urban and rural population rates, but also in terms of median household income (Guzman, 2017) and average academic achievement (National Center for Education Statistics, 2019).

In this study, the main analytic set consists of Wisconsin public school students who entered ninth grade for the first time between the 2006/07 and 2011/12 school years, except for those whose eighth-grade test scores are missing (14% of

population),[4] plus those whose primary high school was one of the 67 schools with missing school-level data (1% of population). In total, the set consists of 352,421 students from 513 high schools. These schools are spread across 382 school districts, 329 of which have only one high school. Most of our analyses restrict to the subset of students (N = 153,760) we consider low-income, as defined later. The student-level data are made available to us by the Wisconsin Department of Public Instruction through the Statewide Longitudinal Data System, and they cover information about individual students as well as the schools they attend, including demographics, test scores and enrolment patterns.

We track high school graduates from Wisconsin into college using data from the National Student Clearinghouse. For every semester, the clearinghouse records the postsecondary institution where students enrol. These data cover between 93% and 97% of all national postsecondary enrolment over the period we study. The Department of Public Instruction conducts a data linkage twice per year – in March and November – for all students who graduate from a Wisconsin public high school, so it captures enrolment and degree attainment even long after students have graduated. We include enrolment in all public, private not-for-profit and private for-profit institutions in our study, and further distinguish between postsecondary institutions in two ways: two-year versus baccalaureate institutions, and, among baccalaureate institutions, less selective and highly selective, or elite, institutions. We define the latter group as being one of the 236 colleges rated "very competitive plus" or higher in Barron's Profiles of American Colleges (2008). We focus on the first college students attend at least half-time within two years of completing high school. This emphasis excludes dual enrolment of students taking college courses while in high school as well as transfers after the initial half-time college matriculation.[5] In this report, we focus mainly on the results for baccalaureate colleges generally but note results for elite colleges when they diverge from those for all baccalaureate colleges.

We employ a variety of student, school and district-level measures in our analysis. Student characteristics include race (white, black, Hispanic or other/multiple race), sex, the percentage of observed years the student was designated an English language learner, whether the student was ever recorded as having a disability, the student's total absences in eighth grade, whether the student was suspended in eighth grade, and the student's eighth-grade math and language arts

4 The majority – about 80% – of these missing students did not attend Wisconsin public middle schools in eighth grade and, according to our correspondence with the Department of Public Instruction, were likely enrolled in private schools.

5 We experimented with evaluating whether students ever attend a baccalaureate college and the results are substantively similar, probably because the rate of attendance does not rise very much when such students are included.

scores from the Wisconsin Knowledge and Concepts Examination (WKCE). We are restricted to measuring students' economic disadvantage using their receipt of free- or reduced-price lunch. Students are eligible for reduced-price lunch if their family income is at or below 185% of the U.S. federal poverty line, which in the 2015/16 school year was $44,863 of annual income for a family of four (U.S. Department of Agriculture, 2015). Families may qualify automatically because they are registered for other federal programmes such as the Supplemental Nutrition Assistance Program or they may apply for eligibility.

Among students who receive subsidised lunch, those who do so for more years tend to have lower family incomes and test scores (Michelmore & Dynarski, 2017). In our own data, we observe a large gradient in test scores and college attendance across students' years of measured disadvantage. Therefore, we measure economic disadvantage as the percentage of observed years that students receive subsidised lunch. We define *low-income* students as those who receive subsidised lunch for at least one year, and *middle/high income* students as those who never do. The former category comprises about 44% of ninth graders in Wisconsin. When we refer to *persistently disadvantaged* students, we mean students who were eligible for subsidised lunch in all of the observed years.

We also examine characteristics of schools and districts that may be associated with college outcomes. At the school level, we measure average enrolment across the study period, the racial/ethnic composition of students, the percentage of students eligible for subsidised lunch, the student-to-school counsellor ratio, the student-to-teacher ratio, the number of Advanced Placement or International Baccalaureate subjects offered, per-pupil educational expenditures, and whether the school is a charter. We additionally measure the segregation of economically disadvantaged students between classrooms (within schools) using the dissimilarity index.[6] We also use data from the American Community Survey aggregated at the school district level in the years 2011–2015, made available through the tabulations from the National Center for Education Statistics. The Center classifies districts' locale type using 12 categories based on population density and distance from urban centres, which we winnow to six: Milwaukee (the largest city), Madison (the second largest city), medium to small city, suburb, town, or rural. We also use these data to measure median household income and the percentages of adults 25 and older in each district who are employed and who hold a bachelor's degree or higher. Finally, we measure the distance between the high school and the nearest Wisconsin

6 In our case, the dissimilarity index can be interpreted as the percentage of students who would have to be moved across classrooms within a school to completely equalise classrooms with respect to free or reduced-price lunch status.

public two-year college, as well as the distance between the high school and the nearest of Wisconsin's bachelor's-granting public universities. There are 13 such universities, constituting the 4-year sector of the University of Wisconsin (UW) system; thus, we henceforth refer to these universities as *UW 4-year campuses*.

Analytic strategy

Public high schools serve student populations that differ on a variety of dimensions, and many of these differences are beyond the control of high schools themselves. For instance, a high school serving a population whose math achievement in middle school is lower than the state average will likely see fewer students attending college after graduation, but part of this difference will be attributable to events prior to high school. Thus, to estimate the effect of schools on students' postsecondary outcomes, we control for students' math and English standardised test scores in the eighth grade, race/ethnicity, sex, English learner status, disability status, absences, and suspensions in the eighth grade. Our strategy compares students who are similar in all of the ways we can observe prior to ninth grade, except that they attend different high schools. However, we probably do not observe other important student characteristics, and thus the results we present below should be interpreted in light of that fact.

We further distinguish different categories of school effects using a schema motivated by prior research (Jennings et al., 2015; Raudenbush & Willms, 1995). Going to one high school rather than another could affect students' college outcomes through two broad factors: the context of the school, including factors like the composition of the student body, the surrounding neighbourhood or the local economy; and the actual practices and organisational structure of the school, including elements like course offerings, teaching practices, counselling or leadership. Our estimates of the *total effect* of schools do not distinguish between these categories. An intuitive way to think about the total effect of the school is what a parent would be interested in knowing about when choosing a high school. Other estimates presented in the Results section, however, explore the measurable features of schools that may be of more interest to policymakers.

The model for estimating total school effects is a hierarchical linear model with student-level independent variables; interaction terms between race and the proportion of years eligible for free or reduced-price lunch, between eighth-grade English language arts score and the proportion of years eligible for free or reduced-price lunch, and between eighth-grade math score and the proportion of years eligible for free or reduced-price lunch, as well as a random intercept for each school. The student-level variables are those listed in the Data section above, with cubic transformations of the eighth-grade test

scores. The interaction terms are in place to capture how students' baccalaureate college attendance is less sensitive to their economic disadvantage when they are black and high-achieving. Each school-specific random intercept is an estimate of the total effect of the school on low-income students' baccalaureate college attendance. To reduce bias due to students' selection into different schools, this estimate is conditional on student-level characteristics. The estimate is not, however, conditional on any school-level characteristics, including those that the school cannot manipulate, such as its locale type. We therefore distinguish this total effect estimate from a value-added estimate, which measures how efficacious a school is net of factors outside its control.

The general model for estimating the effect of school-level characteristics is the same as the foregoing model, except that it adds the school- and district-level variables listed in the Data section. Continuous school- and district-level variables are z-transformed. Rather than estimate the effects of all school characteristics simultaneously in a model containing all school-level variables, we estimate the effect of each school characteristic with a unique specification that controls for only those variables we conceive of as potential confounders, not mediators, on the path to baccalaureate college attendance. Therefore, (a) we estimate the effect of each geographic context variable with a model controlling only for student-level variables; (b) we estimate the effect of each school composition variable with a model controlling only for student-level and geographic context variables; and (c) we estimate the effect of each school organisational feature with a model controlling for student-level, geographic context and school composition variables, but not controlling for other school organisational features. Our design does not exploit exogenous variation in any school-level characteristic, so we cautiously interpret results as only crude estimates of how school characteristics affect baccalaureate college attendance.

Results

Economic disparities in postsecondary education

Before analysing variation in school effects, we begin by describing economic disparities in postsecondary outcomes in Wisconsin. We argue that the disparities are wide and not entirely due to differences in academic achievement. Figures 1 and 2 show the educational outcomes of a single cohort of low-income and middle- to high-income students, respectively, who were ninth graders in Fall 2005. Of every 100 of these low-income ninth graders, 72 hold Wisconsin high school diplomas 11 years later, by Spring 2016 (Figure 1). Baccalaureate college entry and completion are both uncommon, with 19 of every 100

low-income ninth graders enrolling in a baccalaureate college and nine of every 100 holding bachelor's degrees or higher by Spring 2016. Low-income students were about as likely to enter 2-year colleges as they were baccalaureate colleges, but degree attainment is especially rare for those who start at 2-year colleges. Of the 18 in 100 who enter a 2-year college, one held a bachelor's degree by Spring 2016, and four held associate's degrees. An additional one of every 100 achieved an associate's degree through "reverse transfer" from a baccalaureate college to a 2-year college.

The state of affairs is drastically different for middle- and high-income students (Figure 2). In Fall 2005, of every 100 middle/high-income ninth graders, 92 held high school diplomas and 37 held bachelor's degrees by Spring 2016. Forty-seven entered a baccalaureate college, more than twice the frequency of low-income students who were in ninth grade in 2005. Almost four times the share of middle/high-income students earned bachelor's degrees by 2016 as low-income students. Whereas low-income individuals attended baccalaureate colleges and 2-year colleges at similar rates, middle/high-income students were more than twice as likely to attend a baccalaureate college as a 2-year college. When middle/high-income students did attend a 2-year college, they were more likely to attain degrees than were low-income 2-year college students.

Examining our main analytic sample of *all* public school students entering ninth grade in the period 2006–12, we find large unconditional inequality in baccalaureate college attendance. Persistently disadvantaged youth have a baccalaureate college attendance rate of 17%, versus 52% among those who were never economically disadvantaged.

Figure 1

Educational trajectories of low-income students a decade after they enter high school

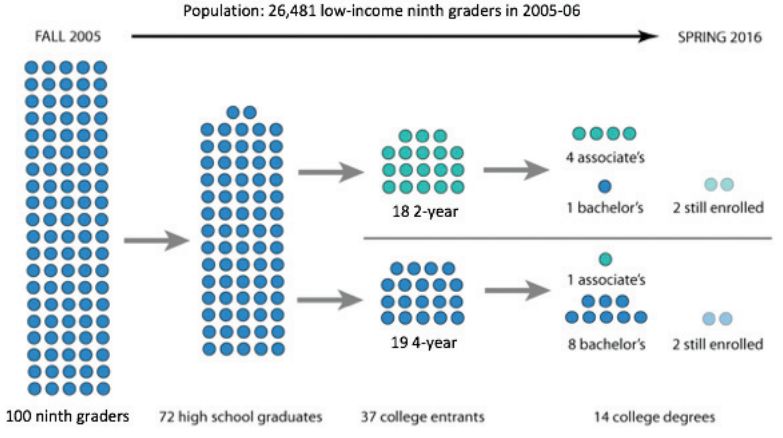
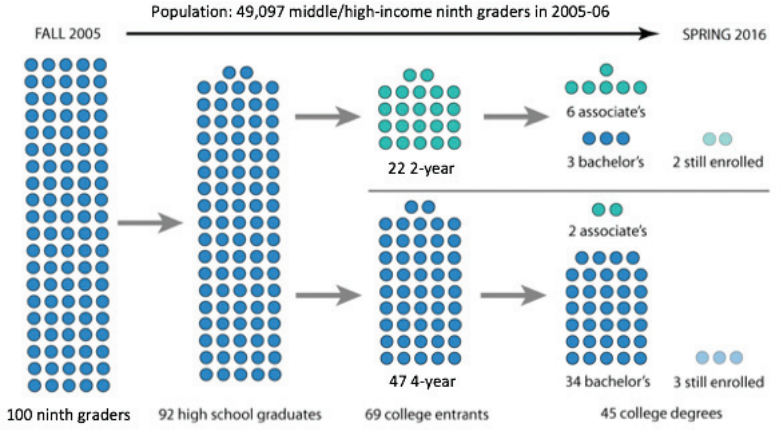


Figure 2

Educational trajectories of middle/high-income students a decade after they enter high school



Do disparities in academic achievement fully explain this gap, or do additional mechanisms come into play? To answer this question, we estimate a statistical model of baccalaureate college attendance that gives the association between economic disadvantage and baccalaureate college attendance while controlling for 12th-grade grade-point average (GPA) and 10th-grade math and language arts test scores.[7] Net of high school academic achievement, persistent economic disadvantage is still associated with a 12 percentage point drop in the probability of attending a baccalaureate college (full model output available upon request). Thus, academic achievement does not fully explain economic disparities in baccalaureate college attendance. While 12th-grade GPA and 10th-grade test scores do not fully capture a student's level of academic achievement, unmeasured aspects of achievement would need to be extremely predictive of baccalaureate college attendance to undermine the claim that economically disadvantaged and advantaged students of comparable achievement have unequal attendance rates.

Differences across Wisconsin High Schools

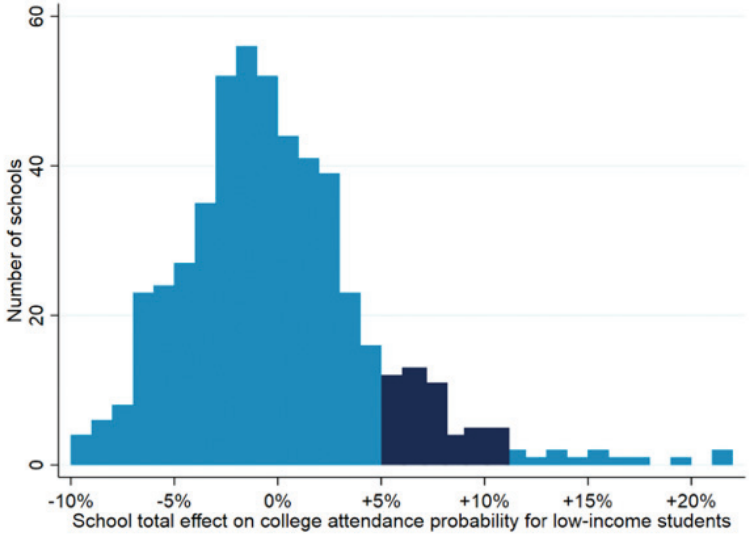
Having described the income gap in college attendance in Wisconsin, the next step in our analysis is to assess differences across high schools. Net of demographic characteristics of students and their levels of eighth-grade achievement,

7 Data on students' coursework and grades are available only in limited years. This analysis therefore consists only of students who finished 12th grade in the 2013/14 school year and only their senior-year grades.

how much do high schools vary in the share of their economically disadvantaged graduates they send on to baccalaureate colleges? Figure 3 plots the distribution of these conditional school differences relative to the average Wisconsin school. The least successful high schools reduce the chances their low-income graduates attend a baccalaureate college by an estimated 10 percentage points, net of demographic attributes and academic achievement in middle school. On the other hand, the most successful high schools add an estimated 20 percentage points to the chances that their low-income graduates will attend a baccalaureate college. Low-income students who attend high schools in the dark blue region of Figure 3 – the 68th through 95th percentiles of high school effectiveness – are conditionally 5 to 11 percentage points more likely to attend baccalaureate colleges within 2 years of graduating from high school compared to the average high school in the state, a substantial boost considering that the overall baccalaureate college attendance rate among low-income students is about 20%. We conclude that where one attends high school can make a substantial difference in the postsecondary trajectories of a low-income student in Wisconsin. In the following two sections, we examine the features of schools' local contexts and organisational features that are associated with better outcomes for low-income students.

Figure 3

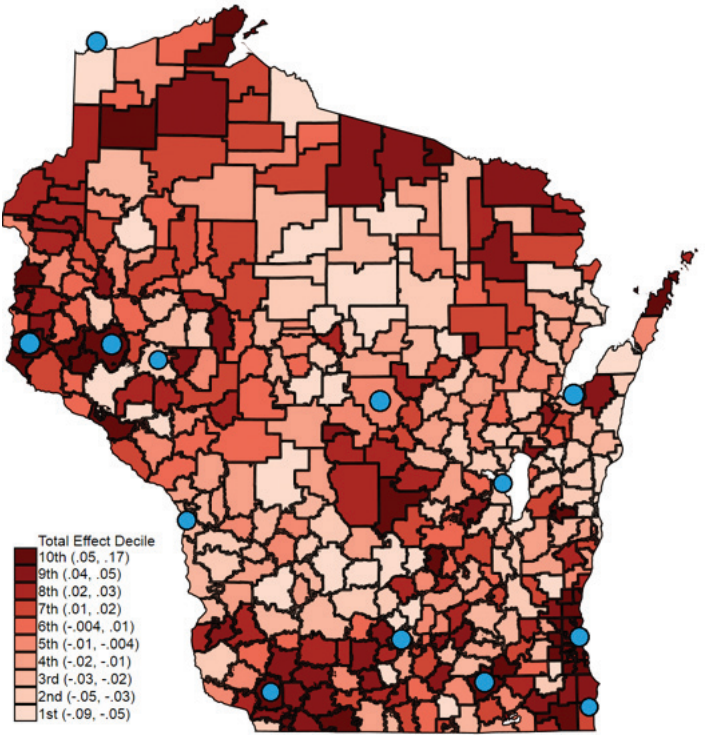
Variation in school total effects on baccalaureate college attendance



Note. Hierarchical linear model controls for eighth-grade test scores and other student-level pre-high school controls. Each school's total effect is estimated by its random intercept in this model. Sample includes all low-income ninth graders entering high school for the first time from 2006 to 2011 (N = 153,760).

Figure 4

Map of district total effects on baccalaureate college attendance



Note. Total effects for districts generated from a model equivalent to the total effects for schools using districts as the cluster variable. Model controls for eighth-grade test scores and other pre-high school controls. Sample includes all low-income ninth graders entering high school for the first time from 2006 to 2011 (N = 153,760). Blue dots represent the locations of UW 4-year campuses.

Local geography and context

Broad patterns and rurality

Geography appears to be important. Much of the variation that we see across schools also manifests across districts with distinct patterning. To visualise variation in effects of schools across place, we use districts as the unit of analysis instead of schools and show the result as a map in Figure 4. With students' eighth-grade characteristics held constant, the districts with the largest positive influence, shaded the darkest, are in Milwaukee suburbs and Milwaukee itself (the largest city in Wisconsin), some districts surrounding the small cities of Madison and Green Bay, districts in north-western Wisconsin near

Minneapolis (the largest city in the state of Minnesota), and some districts in the southwest. In general, Wisconsin's more rural areas see less baccalaureate college attendance than more densely populated areas. On average, a low-income student in Milwaukee is nearly 6 percentage points more likely to attend a baccalaureate college compared to an otherwise similar student living in a rural district. A student in a district classified as suburban is about 3 percentage points more likely to attend compared to a rural student.

Distance to institutions of postsecondary education

The parts of the state with the highest conditional rates of baccalaureate college attendance also tend to be near UW 4-year campuses. To investigate the role of distance to postsecondary institutions, we measure the distances from students' high schools to the nearest UW 4-year and public 2-year campus. We restrict our distance measures to these campuses because public 2-year campuses cover virtually all 2-year enrolment, and the thirteen UW 4-year campuses cover 62% of baccalaureate college enrolment among low-income students. Figure 5 shows students' propensities to attend a baccalaureate college by the distance between their high school and the nearest UW 4-year campus. The relationship between distance and baccalaureate college attendance is strong. On average, a low-income student who attends high school within five miles of a UW 4-year campus is about 5 percentage points more likely to attend a baccalaureate college compared to a student whose high school is 40 miles away, all else equal.

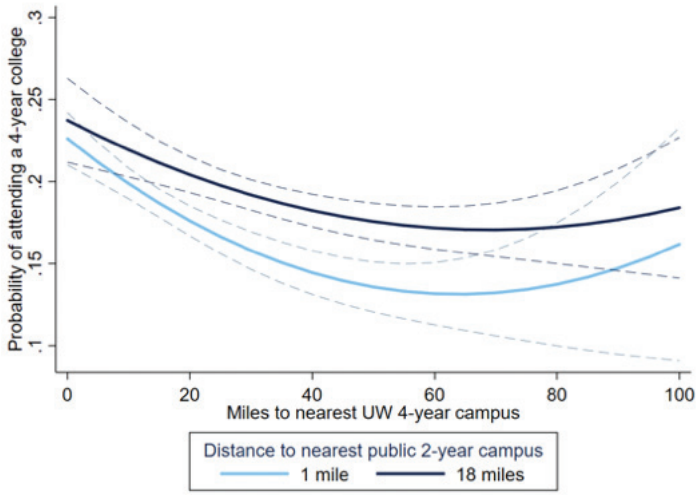
The estimated influence of nearby UW 4-year campuses varies by students' high schools' proximities to 2-year colleges. The light blue curve in Figure 5 plots predicted probabilities for students whose high school is one mile from a public 2-year college, while the dark blue curve plots probabilities for students who are 18 miles from the nearest public 2-year college.[8] Students whose high schools are far from UW 4-year campuses, and yet have a public 2-year college nearby, are less likely to attend a baccalaureate college. This finding provides suggestive evidence that otherwise similar low-income students may be diverted from a baccalaureate to a 2-year college if there is a 2-year college nearby.[9]

8 In our sample, 1 and 18 miles are the 10th and 90th percentile of the distribution of distance to the nearest 2-year college, respectively.

9 In analyses not shown, we find that low-income students are more likely to attend a two-year college if their high school is farther from a UW 4-year campus.

Figure 5

Distance to nearest institutions and baccalaureate college attendance



Note. Predicted probabilities are from a model that controls for student demographics, eighth-grade test scores and other pre-high school controls, district-level education, median income and employment rate. Distance operationalised as a quadratic transformation of nearest UW 4-year campus, a linear term for nearest public 2-year college, and an interaction between the two distance measures. All other covariates are held at their sample means. Dashed lines are 95% confidence intervals. Sample includes all low-income ninth graders entering high school for the first time from 2006 to 2011 (N = 153,760).

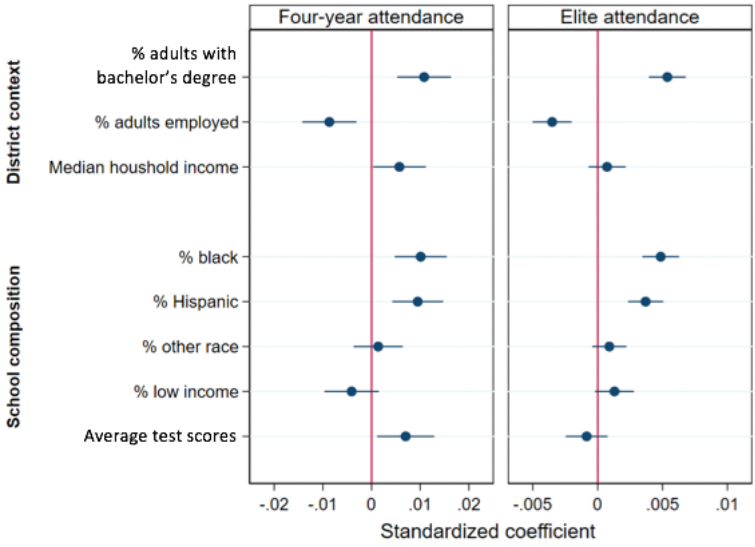
Local demographic composition

We next explore the associations between the observable features of local demographic composition and college outcomes. In general, schools in areas with a higher percentage of adults with bachelor's degrees, higher median household incomes and lower employment rates are slightly more likely to send low-income students to baccalaureate colleges and elite colleges (Figure 6). However, these associations are quite small for baccalaureate college attendance. For instance, a high school in a district that is exceptionally highly educated – concretely, 24% more local adults have bachelor's degrees compared to adults in the average district – increases the probability that a low-income student will attend a baccalaureate college by an estimated 2 percentage points. However, the same type of district increases the probability that a low-income student attends an elite college by an estimated 1 percentage point. This association is more substantial given that the overall attendance rate among low-income students is only 2%. In addition to local demographic composition, school composition also has small associations with college attendance. As Figure 6 shows, college attendance is associated with attending schools with

a higher proportion of black and Hispanic students and higher average test scores, net of controls.

Figure 6

District context and school composition conditional associations with post-secondary outcomes



Note. Coefficients are from models that control for student demographics, eighth-grade test scores and other pre-high school characteristics. Each context and compositional measure is entered in a separate model and scaled to its standard deviation across schools. Bounds show 95% confidence intervals. Sample includes all low-income ninth graders entering high school for the first time from 2006 to 2011 (*N* = 153,760).

School organisational features

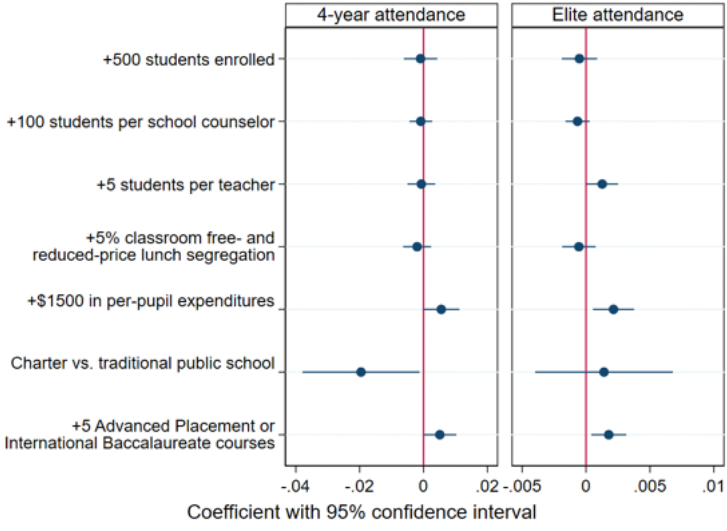
When we turn to school features that we consider more manipulable, such as personnel ratios or course offerings, we find little evidence that these factors contribute to variation in the chances that low-income students attending different high schools go on to attend baccalaureate colleges.

Figure 7 presents the results of our analysis of these measures for baccalaureate and elite college attendance. Each point estimate can be interpreted as the change in a low-income students' attendance probability associated with the stated change in each measure, holding constant students' own characteristics, their geographic context and the composition of their school. School size, school-counsellor-to-student ratio and teacher-to-student ratio are not associated with college attendance among low-income students. The extent to which low-income students are segregated across classrooms within schools also

shows no association with college going. Students who attend public charter schools are 2 percentage points less likely to attend baccalaureate colleges than observably similar students in non-charter public schools. However, charter schools serve only about 3% of public high school students and may often serve populations that were not successful in other public schools and who are therefore less likely to go to college, above and beyond the characteristics we measure. Finally, schools that have higher per-pupil expenditures and offer more Advanced Placement and International Baccalaureate courses do send slightly more low-income students to both baccalaureate and elite colleges. This last relationship is intuitive but is not necessarily causal. For instance, a school offering many different advanced classes may simply be responding to demand from its college-bound students. Taken together, these results indicate that many of the resources we expect to matter for low-income youth are not playing a substantial role in the variation we see across schools.

Figure 7

School organisational feature conditional associations with postsecondary outcomes on college outcomes among low-income students



Note. Coefficients are from models that control for student demographics, eighth-grade test scores and other pre-high school characteristics, as well as district socioeconomic context, school compositional measures and geographic measures. Each organisational measure is entered in a separate model and scaled to the stated metric unit. Bounds show 95% confidence intervals. Sample includes all low-income ninth graders entering high school for the first time from 2006 to 2011 (N = 153,760).

Discussion

This study presents four main findings for baccalaureate college attendance among low-income students at Wisconsin high schools. First, the economic disparity in baccalaureate college attendance is staggering in Wisconsin, with the most economically disadvantaged students 35 percentage points less likely to attend baccalaureate colleges than students who are not economically disadvantaged. Second, high schools vary substantially in their tendency to send low-income students to baccalaureate colleges, even accounting for the fact that students at some high schools have characteristics, such as high eighth-grade achievement, that make them more likely to attend even before the high school can influence them. Third, the geographic context of the high school matters considerably: low-income students' baccalaureate college attendance is negatively associated with being far from a bachelor's-granting UW campus, in a rural area and in an area where adults have low educational attainment. Fourth, school effects still vary considerably after including our full set of controls, suggesting the need for qualitative and survey data to help uncover what leads some high schools to send more low-income students to baccalaureate colleges than others.

Our results build on those of Engberg and Wolniak (2010) and Taylor and colleagues (2018). Both of their studies test for high school-level predictors of students' postsecondary outcomes, and we have tested for numerous additional predictors in the case of low-income secondary school students. Notably, we have shown the great role of geography, as geographic context characteristics constitute several of the school-level factors that are most substantially associated with baccalaureate college attendance. Schools have no control over their geographic contexts, in contrast to their organisational features. Consequently, by examining the role of geography, we have illuminated how between-school variation in postsecondary outcomes is not solely due to what schools are doing right or doing wrong for their low-income students; some of the differences exist simply because some schools are in more favourable locations than others.

Conclusion

Our study has two main limitations. First, students are not randomly assigned to schools and, therefore, an unknown proportion of between-school variation is attributable to student selection based on unobservable characteristics rather than to schools' differential efficacy. We have attempted to minimise this form of bias by including a rich set of control variables, but unobserved student characteristics may still bias school effect estimates. Second, causal

interpretations of the coefficients corresponding to school-level characteristics are not certain, given that we have not exploited random variation in these characteristics. For example, the association between baccalaureate college attendance and proximity to a baccalaureate college may reflect sorting of college-bound students' families across the state rather than reflecting causality.

Economic inequality in baccalaureate college attendance warrants sustained attention both in Wisconsin and nationally. While inequality in K-12 achievement is gravely important, our findings highlight that inequality does not end at 12th grade. We find a large baccalaureate college attendance gap between economically disadvantaged Wisconsinites and their more advantaged peers, even controlling for prior achievement. Narrowing the achievement gap can go a long way to reducing postsecondary disparities, but the disparities will persist without further attention to other reasons low-income students attend at lower rates.

Controlling for all of the student- and school-level characteristics that we measure, school effects still vary nontrivially: a low-income student attending one of the top 5% of schools most likely to send low-income students on to baccalaureate colleges is 20 percentage points more likely to attend a baccalaureate college than a low-income student attending one of the schools in the bottom 5%. This variation is due to some combination of unobserved student characteristics, geographic context, school composition and school organisational characteristics. While we have not identified any school organisational characteristics that are strongly associated with low-income students' baccalaureate college attendance rates, we cannot rule out that such characteristics explain part of the remaining variation in school effects, and that some of these characteristics are within the schools' control. Survey data on factors like school climate can help identify important school organisational features (Engberg & Wolniak, 2010). Qualitative research provides another possible means to discover school characteristics that promote baccalaureate college attendance, since schools may differ in important ways that no one has thought to measure. Regardless of the means, a search for *manipulable* characteristics of high schools that promote low-income students' baccalaureate college attendance has the potential to guide practice in schools and reduce disparities between low-income students and their more economically advantaged peers.

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References

Alm, J., & Winters, J. V. (2009). Distance and intrastate college student migration. *Economics of Education Review*, *28*(6), 728–738. https://doi.org/10.1016/j.econedurev.2009.06.008

Altonji, J. G., & Mansfield, R. K. (2011). The role of family, school, and community characteristics in inequality in education and labor market outcomes. In G. J. Duncan and R. J. Murnane (Eds.), *Whither opportunity* (pp. 339–358). Russell Sage.

Barron's (2008). *Barron's profile of American colleges* (28th ed.). Barron's Educational Series.

Baum, S., Ma, J., & Payea, K. (2013). *Education pays 2013: The benefits of higher education for individuals and society*. College Board.

Belley, P., & Lochner, L. (2007). The changing role of family income and ability in determining educational achievement. *Journal of Human Capital*, *1*(1), 37–89. https://doi.org/10.1086/524674

Bettinger, E. P., Terry Long, B., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of application assistance and information in college decisions. *The Quarterly Journal of Economics*, *127*(3), 1205–1242. https://doi.org/10.1093/qje/qjs017

Borman, G. D., & Dowling, M. (2010). Schools and inequality: A multilevel analysis of Coleman's equality of educational opportunity data. *Teachers College Record*, *112*(5), 1201–1246. https://doi.org/10.1007/s13398-014-0173-7.2

Bryk, A., & Schneider, B. (2002). *Trust in schools: A core resource for improvement*. Russell Sage Foundation.

Byun, S., Meece, J. L., & Irvin, M. J. (2012). Rural-nonrural disparities in postsecondary educational attainment revisited. *American Educational Research Journal*, *49*(3), 412–437. https://doi.org/10.3102/0002831211416344

Castleman, B. L., & Page, L. C. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates? *Journal of Economic Behavior & Organization*, *115*, 144–160. https://doi.org/10.1016/j.jebo.2014.12.008

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966). *Equality of educational opportunity*. U.S. Government Printing Office.

Conger, D., Long, M. C., & Iatarola, P. (2009). Explaining race, poverty, and gender disparities in advanced course-taking. *Journal of Policy Analysis and Management*, *28*(4), 555–576. https://doi.

org/10.1002/pam.20455

Cullen, J. B., Jacob, B. A., & Levitt, S. (2006). The effect of school choice on participants: Evidence from randomized lotteries. *Econometrica*, *74*(5), 1191–1230. https://doi.org/10.1111/j.1468-0262.2006.00702.x

Cutler, D. M., & Lleras-Muney, A. (2006). *Education and health: Evaluating theories and evidence* (No. w12352). National Bureau of Economic Research.

Deming, D. J., Hastings, J. S., Kane, T. J., & Staiger, D. O. (2014). School choice, school quality, and postsecondary attainment. *American Economic Review*, *104*(3), 991–1013. https://doi.org/10.1257/aer.104.3.991

Engberg, M. E., & Gilbert, A. J. (2014). The counseling opportunity structure: Examining correlates of four-year college-going rates. *Research in Higher Education*, *55*(3), 219–244.

Engberg, M. E., & Wolniak, G. C. (2010). Examining the effects of high school contexts on postsecondary enrollment. *Research in Higher Education*, *51*(2), 132–153. https://doi.org/10.1007/s11162-013-9309-4

Frenette, M. (2009). Do universities benefit local youth? Evidence from the creation of new universities. *Economics of Education Review*, *28*(3), 318–328. https://doi.org/10.1016/j.econedurev.2008.04.004

Geppert, C., Bauer-Hofmann, S., & Hopmann, S. T. (2012). Policy reform efforts and equal opportunity-an evidence-based link? An analysis of current sector reforms in the Austrian school system. *CEPS Journal*, *2*(2), 9–29.

Guzman, G. G. (2017). *Household income: 2016*. U.S. Census Bureau.

Hanushek, E. A. (1989). The impact of differential expenditures on school performance. *Educational Researcher*, *18*(4), 45–62. https://doi.org/10.3102/0013189X018004045

Hill, L. D. (2008). School strategies and the "college-linking" process: Reconsidering the effects of high schools on college enrollment. *Sociology of Education*, *81*(1), 53–76. https://doi.org/10.1177/003804070808100103

Hillman, N. W. (2016). Geography of college opportunity: The case of education deserts. *American Educational Research Journal*, *53*(4), 987–1021. https://doi.org/10.3102/0002831216653204

Hirschl, N., & Smith, C. M. (2020). Well-placed: The geography of opportunity and high school effects on college attendance. *Research in Higher Education*, *61*, 567–587. https://doi.org/10.1007/s11162-020-09599-4

Hoffer, T., Greeley, A. M., & Coleman, J. S. (1985). Achievement growth in public and Catholic schools. *Sociology of Education*, *58*(2), 74–97. https://doi.org/10.2307/2112249

Jackson, C. K., Johnson, R. C., & Persico, C. (2015). The effects of school spending on educational and economic outcomes: Evidence from school finance reforms. *The Quarterly Journal of Economics*, *131*(1), 157–218. https://doi.org/10.1093/qje/qjv036

Jennings, J. L., Deming, D., Jencks, C., Lopuch, M., & Schueler, B. E. (2015). Do differences in school quality matter more than we thought? New evidence on educational opportunity in the twenty-first

century. *Sociology of Education*, *88*(1), 56–82. https://doi.org/10.1177/0038040714562006

Johnson, R. C. (2015). Follow the money: School spending from title I to adult earnings. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, *1*(3), 50–76.

Klugman, J. (2012). How resource inequalities among high schools reproduce class advantages in college destinations. *Research in Higher Education*, *53*(8), 803–830. https://doi.org/10.1007/s11162-012-9261-8

Lapid, P. (2017). *Expanding college access: The impact of new universities on local enrollment*. Job Market Paper, University of California.

Long, M. C., Conger, D., & Iatarola, P. (2012). Effects of High School Course-Taking on Secondary and Postsecondary Success. *American Educational Research Journal*, *49*(2), 285–322. https://doi.org/10.3102/0002831211431952

McDonough, P. M. (1997). *Choosing colleges: How social class and schools structure opportunity*. SUNY Press.

McDonough, P. M., & Calderone, S. (2006). The meaning of money: Perceptual differences between college counselors and low-income families about college costs and financial aid. *American Behavioral Scientist*, *49*(12), 1703–1718. https://doi.org/10.1177/0002764206289140

Michelmore, K., & Dynarski, S. (2017). The gap within the gap: Using longitudinal data to understand income differences in educational outcomes. *AERA Open*, *3*(1), 2332858417692958. https://doi.org/10.1177/2332858417692958

National Center for Education Statistics. (2019). National Center for Education Statistics: State-Level Statistics. https://nces.ed.gov/fastfacts/display.asp?id=52

Radford, A. W. (2013). *Top student, top school?: How social class shapes where valedictorians go to college*. University of Chicago Press.

Raudenbush, S. W., & Willms, J. D. (1995). The estimation of school effects. *Journal of Educational and Behavioral Statistics*, *20*(4), 307–335. https://doi.org/10.3102/10769986020004307

Roscigno, V. J., & Crowley, M. L. (2001). Rurality, institutional disadvantage, and achievement/attainment. *Rural Sociology*, *66*(2), 268–292. https://doi.org/10.1111/j.1549-0831.2001.tb00067.x

Roscigno, V. J., Tomaskovic-Devey, D., & Crowley, M. (2006). Education and the inequalities of place. *Social Forces*, *84*(4), 2121–2145. https://doi.org/10.1353/sof.2006.0108

Rumberger, R. W., & Palardy, G. J. (2005). Test scores, dropout rates, and transfer rates as alternative indicators of high school performance. *American Educational Research Journal*, *42*(1), 3–42. https://doi.org/10.3102/00028312042001003

Sardoč, M., & Gaber, S. (2016). The legacy of the Coleman report: Editorial. *CEPS Journal*, *6*(2), 5–8.

Stephan, J. L., & Rosenbaum, J. E. (2013). Can high schools reduce college enrollment gaps with a new counseling model? *Educational Evaluation and Policy Analysis*, *35*(2), 200–219. https://doi.org/10.3102/0162373712462624

Tach, L., Jacoby, S., Wiebe, D. J., Guerra, T., & Richmond, T. S. (2016). The effect of microneighborhood conditions on adult educational attainment in a subsidized housing intervention. *Housing Policy Debate*, *26*(2), 380–397. https://doi.org/10.1080/10511482.2015.1107118

Taylor, C., Wright, C., Davies, R., Rees, G., Evans, C., & Drinkwater, S. (2018). The effect of schools on school leavers' university participation. *School Effectiveness and School Improvement*, *29*(4), 590–613.

Turley, R. N. L. (2009). College proximity: Mapping access to opportunity. *Sociology of Education*, *82*(2), 126–146. https://doi.org/10.1177/003804070908200202

U.S. Department of Agriculture. (2015). Child nutrition programs—income eligibility guidelines. *Federal Register*, *80*(61), 9–10.

Webber, D. A. (2016). Are college costs worth it? How ability, major, and debt affect the returns to schooling. *Economics of Education Review*, *53*, 296–310. doi:10.1016/j.econedurev.2016.04.007

Wolniak, G. C., & Engberg, M. E. (2007). The effects of high school feeder networks on college enrollment. *The Review of Higher Education*, *31*(1), 27–53. https://doi.org/10.1353/rhe.2007.0054

Biographical note

Christian Michael Smith, PhD, is a Postdoctoral Scholar in sociology at the University of California Merced, USA. He researches social stratification and education, focusing on socioeconomic inequalities in postsecondary education outcomes and the policies meant to redress these inequalities.

Noah Hirschl is a doctoral candidate in sociology at the University of Wisconsin-Madison, USA. His research focuses on racial and socioeconomic inequality in education and the labor market. He is specifically interested in how the United States' system of higher education shapes inequality in economic resources among households.

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Are they Stress-Free? Examining Stress among Primary School Teachers in Tanzania

Patrick Severine Kavenuke*[1], Joel Jonathan Kayombo[2] and Mjege Kinyota?[2]

Teachers enter the profession with enthusiasm for the new adventure. Unfortunately, when they start working, they encounter circumstances that give rise to stress. The present study, which used a sample of 550 participants from 50 primary schools selected from the Kisarawe district in the Coastal Region of Tanzania, examines the extent of stress among primary school teachers and the factors influencing stress. Overall, the results indicate that teachers' levels of stress range from low to moderate. Moreover, the results from hierarchical regression analysis indicate that factors such as sex, class size, age, career intentions and teaching subject significantly predict teachers' stress. The study concludes that there is a need for the government, policymakers and school administrators to reduce teachers' workload. Furthermore, school administrators in particular should be supportive and should design mechanisms that could develop a sense of collegiality among teachers in order to improve teacher-to-teacher relationships.

Keywords: administrative support, task overload, teacher stress, teacher-to-teacher relationship, working with students

1 *Corresponding Author. Dar es Salaam University College of Education, University of Dar es Salaam, Tanzania; patrickkavenuke@yahoo.com.

2 Dar es Salaam University College of Education, University of Dar es Salaam, Tanzania.

Ali so učitelji pod stresom? Preučevanje stresa med učitelji na osnovnih šolah v Tanzaniji

Patrick Severine Kavenuke, Joel Jonathan Kayombo in Mjege Kinyota

Učitelji vstopajo v poklic z navdušenjem nad novimi dogodivščinami. Žal se ob nastopu dela srečujejo z okoliščinami, ki povzročajo stres. Ta raziskava je zajela petsto petdeset udeležencev iz petdesetih osnovnih šol, izbranih v okrožju Kisarawe v obalni regiji Tanzanije; preučuje obseg stresa med osnovnošolskimi učitelji in dejavnike, ki nanj vplivajo. Izsledki kažejo, da je stopnja stresa pri učiteljih nizka do zmerna. Rezultati hierarhične regresijske analize še kažejo, da dejavniki, kot so: spol, velikost razreda, starost, poklicne ambicije in predmet poučevanja, statistično pomembno napovedujejo stres učiteljev. Raziskava ugotavlja, da morajo vlada, oblikovalci politik in ravnatelji zmanjšati delovno obremenitev učiteljev. Nadalje bi morali zlasti ravnatelji delovati podporno in oblikovati mehanizme, ki bi lahko razvili občutek kolegialnosti med učitelji, da bi tako izboljšali odnose med njimi.

Ključne besede: administrativna podpora, preobremenjenost z nalogami, stres učiteljev, odnosi med učitelji, delo z učenci

Introduction

Teaching is widely recognised as a demanding and stressful profession (Alhija, 2015; Kavita & Hassan, 2018; Shkëmbi et al., 2015; Yu et al., 2016). The challenges associated with the profession, such as administrative burdens, classroom management difficulties and lack of autonomy, contribute greatly to teachers' stress. Moreover, teachers encounter significant social and political scrutiny coupled with high levels of accountability as they perform their jobs. In our contemporary society, teachers strive for performance while trying to maintain a work-life balance, which leads to an insidious increase in stress. As an issue concerning both policy and practice, teacher stress has been treated as mundane and little attention is therefore devoted to it. In response to this, researchers have become increasingly interested in studying teacher stress over the past four decades (Kyriacou, 2001; Mintz, 2007). From the sociological perspective, teacher stress affects classroom socialisation and is therefore hypothesised to affect the classroom climate and the entire quality of the teacher-students relationship (Rafiq & Shah, 2015). Teachers who experience high levels of stress are more likely to criticise students and lose their temper than those with lower levels of stress. Consequently, when teachers are stressed, students may display a low level of social adjustment (Greenberg et al., 2016). In this regard, it has been suggested that for teachers to successfully connect with their students, so that students in turn connect with the subject matter, teachers need a variety of resources that could free them from all sorts of stress (Chang, 2009).

Teacher stress is "the experience by a teacher of unpleasant, negative emotions, such as anger, anxiety, tension, frustration or depression, resulting from some aspect of their work as a teacher" (Kyriacou, 2001, p. 28). As stated earlier, teaching as a profession is recognised as a stressful undertaking (Alhija, 2015; Yu et al., 2016). Some studies (e.g., von der Embse et al., 2016) have argued that teacher stress is a result of teacher job dissatisfaction and poor student outcomes. Research reveals several sources of teacher stress, including working with unmotivated students, exposure to frequent curricula changes, challenging relationships with colleagues and administrators, poor school working conditions, task overload and weak administrative support (Mintz, 2007; Moracco et al., 1982).

Factors influencing teacher stress

Depending on how teacher stress is measured, research on the factors influencing teacher stress has produced mixed results. The following literature review is undertaken with reference to the dimensions of measuring

teacher stress, namely, administrative support, working with students, teacher-to-teacher relationship and task overload. These dimensions have been augmented across factors such as sex, teaching experience, education level, subject specialisation, class size and age.

Starting with sex, numerous studies (Alson, 2019; Aydin & Kaya, 2016; Lasebikan, 2016; Pang, 2012) have found that there is no significant difference between males and females regarding teacher stress. However, other studies have indicated a significant difference between males and females with regard to teacher stress (Aftab & Khatoon, 2012; Yu et al., 2016). For instance, while Yu et al. (2016) found that female teachers experience more social stress than male teachers, Aftab and Khatoon (2012) reported that male teachers are more stressed than their female counterparts.

With regard to teaching experience, studies (e.g., Pang, 2012; Yu et al., 2016) have indicated that there is no significant relationship between the number of years of teaching experience and teacher stress, while other studies have found a significant relationship between teaching experience and teacher stress (Aydin & Kaya, 2016; Kavita & Hassan, 2018). Moreover, the findings are contradictory in terms of the level of stress and the years of teaching. For instance, while scholars (e.g. Alson, 2019; Aydin & Kaya, 2016) have noted that the stress level in teachers with few years of work experience (below 5 years) was reported as being higher than in teachers who had worked for a period of more than 5 years, Kavita and Hassan (2018) reported that teachers with work experience of over 11 years felt more stressed compared with those with less than 11 years of work experience. Given the continued mixed results, Yu, et al. (2016) highlight the need for further research to investigate the relationship between years of teaching and teacher stress.

Level of education has also been linked with teacher stress. Several studies (e.g., Kavita & Hassan, 2018; Shkëmbi, et al., 2015) have established a relationship between level of education and teacher stress. For instance, a study by Shkëmbi et al. (2015) found that teachers with lower levels of education recorded higher levels of stress. In contrast, Aydin and Kaya (2016) found that stress levels originating from school facilities, the teaching profession, students and school administration did not demonstrate a significant difference in terms of educational status, suggesting that there is no significant relationship between teachers' level of education and their level of stress.

A relationship between teaching subject and teacher stress has also been established. It has been observed that there is a significant difference in mean scores based on subjects taught. For instance, a significantly higher mean score was observed among teachers teaching science subjects compared with those

teaching either arts or commercial subjects (Lasebikan, 2016). Class size has also been reported to have a significant relationship with teacher stress (Aftab & Khatoon, 2012; Luvinga, 2013). Pang (2012) noted that higher teacher stress was observed among teachers who taught large classes. In addition, studies have emphasised that an excessive number of students taught by the teacher increases teacher stress in the dimension of task overload (Luvinga, 2013; McCarthy et al., 2016).

Similarly, age has been associated with teacher stress. In particular, studies have found that teachers under 40 years of age have more stress than older teachers (e.g., Yu et al., 2016). According to Yu et al. (2016), the reasons for young teachers being more stressed than older teachers is that young teachers encounter challenges associated with personal life events, such as buying houses and cars, getting married, raising children and caring for the elderly. In contrast, other studies have concluded that there is no significant relation between age and teacher stress (Alson, 2019; Aydin & Kaya, 2016; Lasebikan, 2016). With regard to many of the reviewed variables, research has produced mixed results. This reminds researchers of the need to continue to conduct studies of this nature in order to investigate the relationship between independent variables and teacher stress.

Teacher stress in the Tanzanian context

Like many other countries, Tanzania has teachers with stress symptoms and several studies have been conducted on the subject (Boniface, 2016; Hecker et al., 2018; Kayumba, 2017; Luvinga, 2013; Mkumbo, 2014). Luvinga (2013) found that teachers in the Kinondoni municipality in Tanzania have some signs of stress, such as temper outbursts, increased aggression, inability to concentrate, excessive use of alcohol and making decisions about death and suicide.

Similarly, Hecker et al. (2018) found that the highest level of stress among teachers was observed in their personal life, work life and student-related life. Inter alia, these researchers found the most prevalent symptom of teacher stress to be a feeling of tiredness. Feelings of stress among teachers were mainly observed in their working environment and in teaching-related activities (Boniface, 2016; Hecker et al., 2018). The literature indicates that the main contributors to teacher stress include the lack of public acknowledgment of teachers and pressurising curriculum demands (Hecker et al., 2018).

Theoretical framework

Studies have focused on teacher burnout as a result of teacher stress (Chang, 2009; Weinstein & Trickett, 2016), resulting in teacher stress being a relatively overlooked area of research in the broader context of education (Chang, 2009; Weinstein & Trickett, 2016). Based on the reviewed literature, we constructed a theoretical framework using four important dimensions of teacher stress: administrative support, working with students, teacher-to-teacher relationship and task overload. Several other researchers (e.g., Greenberg, et al., 2016; Kyriacou, 2001; Lasebikan, 2016; Mintz, 2007; Moracco et al., 1982; Yu et al., 2016) have recognised at least one of these as important dimensions of measuring teacher stress.

Administrative support

School administrators can make teachers feel comfortable in their teaching career, but can also make them feel stressed (Kyriacou, 2001). School administrators tend to focus on work efficiency, which leaves teachers feeling stressed (Yu et al., 2016). Moreover, teachers become stressed when they do not receive support from school administrators.

Working with students

Teaching involves complex student-teacher relationships (Chang, 2009), and teachers may become angry and frustrated as they interact with and care for the students (Addison & Yankyera, 2015; Chang, 2009; Kyriacou, 2001). Thus, teachers tend to be stressed with students particularly in classroom management when dealing with students with different behaviours (Addison & Yankyera, 2015; Chang, 2009; Moracco et al., 1982; Pang, 2012).

Teacher-to-teacher relationship

While the teacher-to-teacher relationship is a source of strength, it can also be a source of teacher stress. Several studies (e.g., Kyriacou, 2001; Moracco et al., 1982) assert that stress is produced as teachers interact with fellow teachers. Similarly, Wengel et al. (2015) have argued that poor relationships with colleagues cause stress in workplaces.

Task overload

Task overload is another dimension that has been used to measure teacher stress (Addison & Yankyera, 2015; Kyriacou, 2001; Moracco et al., 1982; Yu et al., 2016). In schools, teachers encounter responsibilities where they have

to work as class teachers, subject teachers and discipline teachers, as well as taking on other managerial roles. Moreover, teachers are engaged in duties that are more or less ambiguous (Wengel et al., 2015), which also leads to stress.

Statement of research questions and hypotheses

Many countries, including Tanzania, have recently undergone numerous education reforms, such as adopting a learner-centred approach to teaching and learning. This approach requires that teachers and students are in a horizontal relationship to allow them to freely contribute to knowledge production (Freire, 2013). For teachers to implement such education reforms, they have to work without stress. The question that arises is: Are Tanzanian primary school teachers sufficiently free from stress that they can happily implement such reforms in schools? The reviewed literature suggests that teachers in Tanzania seem to be teaching while stressed (Boniface, 2016; Hecker et al., 2018; Luvinga, 2013; Kayumba, 2017). Furthermore, with respect to the reviewed literature, none of the reviews has focused on teacher stress in primary school teachers. It is within this conundrum that the present research emerged to examine teacher stress in primary schools in the Coast Region of Tanzania. This study was guided by two research questions and the subsequent hypotheses.

(i) What is the extent of stress among primary school teachers in the selected area?

H1: High levels of stress will be observed among teachers in all dimensions of teacher stress.

(ii) What factors influence stress among primary school teachers in the selected area?

H2: There will be no significant difference between males and females with regard to their stress.

H3: There will be a significant relationship between years of teaching experience and teacher stress.

H4: There will be a significant relationship between level of education and teacher stress.

H5: There will be a significant relationship between teaching subject and teacher stress.

H6: There will be a significant relationship between class size and teacher stress.

H7: There will be a significant relationship between career plan and teacher stress.

H8: Teachers' age will have a significant effect on their stress.

Method

Research approach and design

The study was quantitative in character and a survey research design was used to generate answers to the research questions and to confirm or refute the hypotheses guiding the study. The design permitted the researchers to examine the opinions of participants (Ary et al., 2010) regarding the extent of stress among primary school teachers and the factors influencing stress among primary school teachers in Tanzania. In the process, the researchers were guided by the guidelines for designing survey research, such as adapting reliable survey items from tested instruments and minimising central tendency errors.

Study participants and sampling

The sample consisted of 550 teachers from 50 primary schools located in the Kisarawe district in the Coast Region of Tanzania. Some 50 primary schools were randomly selected from a total of 78 primary schools in the district. In each school, at least 11 primary school teachers were randomly selected to participate in the study by filling in the questionnaires. Their mean age was 34.96 years ($SD = 7.942$). Of the 550 participants, 288 (53.1%) were female and 254 (46.9%) were male (Table 1). The majority of the teachers were teaching language and arts subjects. In terms of their level of education, the participants were Grade A (Certificate) teachers, Diploma teachers, and Bachelor Degree and above teachers. Of the 550 participants, the majority (252 teachers or 46.3%) were Grade A (Certificate) teachers, while the smallest proportion were Diploma teachers (76 teachers or 14.0%) (See Table 1).

In the Tanzanian context, Grade A (Certificate) teachers attend a two-year training programme and the entry qualification is the Certificate of Secondary Education (Ordinary Level) (UNESCO, 2010). Grade A (Certificate) teachers mainly teach in pre-primary and primary schools. Similarly, Diploma teachers are those who acquire qualifications after attending a two-year course (Ministry of Education and Vocational Training [MoEVT], 2007). The difference is that completing high school examinations with a minimum qualification of 'division III' is the entry qualification for one to attend a training programme resulting in a Diploma level of education (UNESCO, 2010). In addition, there are Bachelor Degree teachers, who complete a three-year course in teacher education universities. In Tanzania, the basic educational qualifications for secondary school teachers are Diploma and Bachelor Degree teachers (Chikoyo, et al., 2020; MoEVT, 2009), although teachers with a Postgraduate Diploma in Education, and a Master in Education

degree also qualify to teach students in secondary education (MoEVT, 2009). Nevertheless, given the current government's decision to transfer some secondary school teachers to primary schools, it has recently been common to find teachers with Diploma and above teaching in primary schools. Moreover, given the decision of some Grade A (Certificate) teachers to upgrade their education to a higher level of education through teacher professional development programmes, many primary schools are staffed with teachers holding Diploma and Bachelor Degrees.

Table 1

Demographic characteristics of the sample

Characteristics (N = 550)	N	%
Sex		
Male	254	46.9
Female	288	53.1
Teaching subject		
Language and arts	254	46.9
Social science	104	19.2
Mathematics and science	184	33.9
Years of teaching experience		
Less than 3	32	5.9
3–6	234	43.2
7–10	80	14.8
11 and above	196	36.2
Level of education		
Grade A (Certificate)	252	46.3
Diploma	76	14.0
Bachelor degree and above	216	39.7
Number of students taught		
1–45	158	28.9
46–90	206	37.7
91–135	84	15.4
136 and above	98	17.9
Career plan		
Leave teaching	82	15.1
Continue teaching	462	84.9
Extra responsibilities		
Yes	504	92.0
No	44	8.0
Type of extra responsibility		
Head teacher	26	5.1
Class teacher	292	57.5
Discipline teacher	20	3.9
Academic teacher	66	13.0
Games and sports teacher	26	5.1
Others	78	15.0

Research site

Studies on teacher stress have previously been conducted in Tanzania. Unfortunately, none of the studies reviewed undertook research on schools located in the Coast Region. It is important to note that the district selected in this region is primarily rural and therefore represents the typical working environment for many teachers in the country. We decided to conduct research on teacher stress that is sensitive to the rural context for the purpose of building evidence on the topic. Studies related to teacher stress have been conducted in secondary schools in the Dodoma region (e.g., Boniface, 2016) and the Dar es Salaam region (e.g., Luvinga, 2013; Hecker et al., 2018), as well as in the Arusha, Kagera, Kigoma, Iringa and Lindi regions (e.g., Hecker et al., 2018). Teacher stress studies have also been conducted in teacher training colleges, such as Marangu in Kilimanjaro (e.g., Kayumba, 2017). Similarly, teacher stress studies have been conducted in universities in the Dar es Salaam and Dodoma regions (e.g., Mkumbo, 2014). From this review, it is noted that many studies have focused on other levels of education, leaving the primary school area under researched.

Instruments

In the present study, we used standardised questionnaires as the main instrument for collecting data, with a set of items for each dimension of measuring teacher stress.

Administrative support

The dimension of administrative support was measured using a four-point scale (1 = strongly disagree, 4 = strongly agree) for items measuring the extent of stress among primary school teachers. The dimension was measured using six items (e.g., "I feel my head teacher is less concerned about what happens in the classroom"). The items were modified from a study done by Moracco et al., (1982). After running a reliability test, all of the six items were retained. The Cronbach's alpha of the study by Moracco et al. (1982) for this dimension was .91, while the Cronbach's alpha for this dimension in the present study is .83.

Working with students

We measured working with students as a dimension of teacher stress using a four-point scale (1 = strongly disagree, 4 = strongly agree). Nine items (e.g., "I feel stressed in dealing with students who do not want to learn") were

used to measure this dimension. After running a reliability test, all nine items were retained. The items were adopted from Moracco et al. (1982) and customised to fit the local study context. The Cronbach's alpha of the study by Moracco et al. (1982) for this dimension was .86. In the present study, the reliability coefficient is .81.

Teacher-to-teacher relationship

We measured the dimension of teacher-to-teacher relationship using a four-point scale (1 = strongly disagree, 4 = strongly agree). Five items (e.g., "I feel there is competition between teachers in my school rather than a team spirit of cooperation") were used to measure the dimension. Again, after running a reliability test, all five items were retained. The items were adopted and customised from a study by Moracco et al. (1982). The Cronbach's alpha of the study by Moracco et al. (1982) for this dimension was .85, while the reliability coefficient for this dimension in the present study is .85.

Task overload

The dimension of task overload was measured using a four-point scale (1 = strongly disagree, 4 = strongly agree). Seven items (e.g., "I feel I hardly finish my work-related activities") were used to measure this dimension. The items were modified from a study by Moracco, et al. (1982). Similarly, after running a reliability test, all seven items were retained. The reliability coefficient of the study by Moracco et al. (1982) for this dimension was .80, while the reliability coefficient for this dimension in the present study is .81.

Independent variables

With reference to the reviewed literature, we included several independent variables. Hence, independent variables such as sex were included in the study. We also included teaching experience. Participants were asked to indicate the number of years of teaching using a 4-point scale (1 = less than 3 years, 2 = 3–6 years, 3 = 7–10 years, and 4 = 11 years and above). The participants were also asked to indicate their level of education using a 3-point scale (1 = Certificate, 2 = Diploma, and 3 = Bachelor degree and above). The participants were also asked to indicate their teaching subjects using a 3-point scale (1 = Language and arts, 2 = Social science, and 3 = Mathematics and science). In addition, the participants were asked to specify the number of students they were teaching at the time of data collection using a 4-point scale (1 = 1–45 students, 2 = 46–90 students, 3 = 91–135 students, and 4 = 136 and above students). Furthermore, the

participants were asked to specify their age. They were also asked to indicate their career plan by specifying whether or not they want to continue teaching. Despite mentioning the influence of teacher stress in deciding to quit teaching, few studies have established a relationship between the decision to leave or continue teaching and teacher stress. The decision to include many independent variables therefore adds value to the exploratory nature of the present study. The purpose of including all of these independent variables was largely to establish whether or not they relate to the dependent variables.

Data analysis

We used the software package SPSS version 22 to analyse the data collected. In order to be able to respond to the hypotheses defined earlier, several analyses were computed. Firstly, a descriptive statistical analysis was conducted for the purpose of computing the frequencies, percentages, mean and standard deviation. A reliability test was also conducted in order to calculate the Cronbach's alpha for each dimension. The reliability scores reported in this study represent the consistency between the items for each dimension. To respond to the first research objective, we calculated the mean scores and standard deviations for different dimensions. In relation to our scale, mean scores greater than or equal to 3 ($M \geq 3$) (equivalent to "agree" on our scale) were considered as high levels of stress. Mean scores between 2 and 3 ($2 < M < 3$) were considered as moderate levels of stress, while mean scores of 2 and below ($M \leq 2$) were considered as low levels of stress. Secondly, we computed hierarchical regression analysis in order to respond to the second research question and its subsequent hypotheses. Before regression analysis was performed, all of the categorical variables were transformed into dummy variables.

Results

The research questions guiding the study were: (i) What is the extent of stress among primary school teachers in the selected area? (ii) What factors influence stress among primary school teachers in the selected area? In line with these research questions, several hypotheses were developed. The results are presented in accordance with the research questions and the hypotheses.

The extent of stress among primary school teachers in the selected area

In order to respond to the first research question, we calculated the mean scores and standard deviations for all of the dimensions measuring teacher stress. For age, we computed correlation, and we thus carried out the Pearson correlation. Overall, the results indicated that the teachers' levels of stress ranged from low to moderate (Table 2).

Table 2

Mean scores for dimensions measuring teacher stress

Administrative support	Working with students	Teacher-to-teacher relationship	Task overload
M = 1.77, *SD* =.580	*M* = 2.24, *SD* = .647	*M* = 1.73, *SD* = .664	*M* = 2.33, *SD* = .675

In order to understand how teachers scored on the individual items measuring teacher stress, we calculated the mean scores and standard deviation for individual items in each dimension. The results indicate that although teachers were less stressed, they scored relatively higher in many of the individual items measuring the dimension of working with students and in the dimension of task overload than the rest of the dimensions (Table 3).

Table 3

Mean scores of teacher stress dimensions and their respective individual items

	Min	Max	*M*	*SD*
Administrative support	**1**	**4**	**1.77**	**.580**
I feel there is lack of administrative support in my school	1	4	1.78	.773
I feel my head teacher lacks insight into classroom problems	1	4	1.63	.737
I feel my opinions are not valued by my head teacher	1	4	1.70	.742
I feel there is lack of recognition for good teaching in my school	1	4	1.92	.920
I feel I cannot tell my head teacher in an open way how I feel about many school-related matters	1	4	1.88	.867
I feel my head teacher is less concerned about what happens in the classroom	1	4	1.72	.717
Working with students	**1**	**4**	**2.24**	**.647**
I feel stressed in dealing with students who do not want to learn	1	4	2.64	1.622
I feel stressed telling my students the same things every day	1	4	2.43	.985
I feel stressed with undisciplined students who take much of my time	1	4	2.41	.983
I feel I do not have adequate control over my students	1	4	1.50	.728

	Min	Max	*M*	*SD*
I feel there is lack of parental involvement in dealing with students' discipline problems	1	4	2.11	.919
I feel stressed due to students' learning problems	1	4	2.38	.904
I feel stressed due to students' psychological problems	1	4	2.30	.837
I feel stressed due to students' individual differences	1	4	2.35	.920
I feel stressed due to taking responsibility for students every day	1	4	2.05	.915
Teacher-to-teacher relationship	**1**	**4**	**1.73**	**.664**
I work in a school where there is an atmosphere of conflict between teachers	1	4	1.63	.845
I feel there is competition between teachers in my school rather than a team spirit of cooperation	1	4	1.86	.834
I feel there is a poor teacher-to-teacher relationship in my school	1	4	1.65	.754
There is poor communication between teachers in my school	1	4	1.72	.863
I feel some teachers in my school are incompetent	1	4	1.83	.869
Task overload	**1**	**4**	**2.33**	**.675**
Some teachers in my school do not do their job	1	4	2.00	.941
I feel overloaded	1	4	2.40	1.006
I feel overwhelmed by additional responsibilities	1	4	2.28	1.008
I feel I hardly finish my work-related activities	1	4	2.10	.946
I have insufficient opportunity for rest and preparation during the school day	1	4	2.34	.999
I do school work at home to meet what is expected	1	4	2.69	1.002
I feel stressed due to organising learning activities of students with different capabilities	1	4	2.40	.980

Factors influencing stress among primary school teachers in the selected area

Predictors of teacher stress (Administrative support)

In responding to this research question, we computed hierarchical regression analysis, whereby personal characteristics were first added, followed by work-related variables. The results of the first block linear regression analysis (Table 4) revealed that the model was statistically significant ($p < .001$). In addition, the R^2 value of .012 implies that personal variables associated with this regression model explain 1.2 percent variance in the sub-scale of administrative support. Specifically, there was a significant positive effect for the level of education ($B = .094$, $p < .01$), implying that the level of stress increased with an increase in the level of education. Also, there was a negative effect for age ($B = -.108$, $p < .01$) in the dimension of administrative support, implying that young teachers felt more stressed with that dimension. Variables of years of work experience, number of students, career plans, whether or not teachers have additional responsibilities, and teaching subject were added to the second block. The results indicated that the model is significant ($p < .01$). In this case,

number of students (B = .165, p < .05) and having no additional responsibilities (B = -.116, p < .05) had significant effects on teacher stress related to administrative support. In other words, large class sizes and additional responsibilities positively predicted teacher stress in this dimension. However, the effect of age and level of education disappeared in the second block.

Table 4

Hierarchical regression for predictors of teacher stress

Predictor variables	Model 1				Model 2			
	Administrative support	Working with students	Teacher-to-teacher relationship	Task overload	Administrative support	Working with students	Teacher-to-teacher relationship	Task overload
Personal characteristics								
Sex (1 = Male; 0 = Other)	.605	.169	.005* *(.123)*	.000* *(.243)*	.426	.272	.043* *(.092)*	.000* *(.214)*
Age	.019* *(-.108)*	.485	.000* *(-.203)*	.000* *(-.216)*	.290	.666	.000* *(-.272)*	.001* *(-.243)*
Education level (1 = Certificate, 3 = Bachelor degree and above)	.041* *(.094)*	.765	.000* *(.255)*	.222	.078	.690	000* *(.221)*	.092
Work-related characteristics								
Years of work experience					.561	.297	.052	.400
Number of students (class size)					.000* *(.165)*	.713	.072	.017* *(.111)*
Career plan (1 = Work as a teacher, 0 = Other)					.087	.207	.000* (.248)	.035* *(.096)*
Other responsibility (1 = No other responsibility, 0 = Other)					.011* *(-.116)*	.371	.788	.692
Language and arts (1 = Language and Arts, 0 = Other)					.519	.768	.077	.204
Social sciences (1 = Social sciences, 0 = Other)					.622	.489	.017* *(-.201)*	.412
R^2	.012	.001	.097	.110	.049	.004	.163	.120
ΔR^2	.012	.001	.097	.110	.037	.003	.066	.010
ΔF	.035*	.453	.000*	.000*	.000*	.576	.000*	.078

Predictors of teacher stress (Working with students)

The results of the first and second block linear regression analysis indicate no statistical significant effects (p > .001). This implies that all of the independent variables included in the models did not predict teacher stress in the aspect of working with students.

Predictors of teacher stress (Teacher-to-teacher relationship)

The results of the first block linear regression analysis (Table 4) indicate that the model is significant ($p < .001$), with the R^2 value of .097 implying that personal variables associated with this regression model explained 9.7 percent variance in the aspect of teacher-to-teacher relationship. In this case, there was a significant positive effect for level of education ($B = .255$, $p < .01$) and being male ($B = .123$, $p < .01$), and a negative effect for age ($B = -.203$, $p < .01$). When the variables of years of work experience, number of students, career plans, whether or not teachers have additional responsibilities, and teaching subject were added to the second block, the model was significant ($p < .01$). In this case, being male ($B = .092$, $p < .05$), age ($B = -.272$, $p < .05$), level of education ($B = .221$, $p < .05$), intentions to work as a teacher ($B = .248$, $p < .05$) and majoring in social sciences ($B = -.201$, $p < .05$) were significant predictors of teacher stress in the aspect of teacher-to-teacher working relationships. Generally, the second model was stronger, with the entered variables explaining 16.3 percent variance in stress associated with teacher-to-teacher relationships.

Predictors of teacher stress (Task overload)

The results of the first block linear regression analysis (Table 4) revealed that the model was statistically significant ($p < .001$). Moreover, the R^2 value of .110 implied that personal variables associated with this regression model explained 11 percent variance in teacher stress related to task overload. Specifically, there was a significant positive effect for being male ($B = .243$, $p < .01$), implying that males felt more stressed than females in this dimension. Also, there was a negative effect for age ($B = -.216$, $p < .01$), which implies that young teachers felt more stressed with the dimension of task overload. As shown in Table 4, the second block linear regression model was not significant in this case.

Discussion

The descriptive statistics indicate that the majority of the participants were Grade A certificate teachers. Many teachers taught an excessive number of students, more than the recommended number. For instance, it was revealed that 388 teachers (71%) had more than 45 students, which is the recommended number of students per teacher. The findings even indicated that class size is a positive predictor of teacher stress in the aspects of administrative support and task overload. Therefore, if the trend of large class size is not reversed, teacher stress and teacher burnout may continue, thus affecting teachers' overall well-being and performance. Furthermore, the results indicated that many (92%) of

the surveyed teachers had extra responsibilities, including being head teachers, class teachers, discipline teachers, academic teachers and other related responsibilities.

Overall, the results indicated that the teachers' levels of stress ranged from low to moderate. The teachers nonetheless scored relatively higher mean scores in individual items measuring the aspects of working with students and task overload. This indicates that working with students and task overload contribute more to teacher stress than other aspects. Regarding task overload, the findings are similar to previous studies (Addison & Yankyera, 2015; Kyriacou, 2001; Moracco et al., 1982; Yu et al., 2016) that have shown that task overload leads to increased stress among teachers.

In addition, we found that sex was significantly related to teacher stress in aspects such as teacher-to-teacher relationship and task overload. These results replicate earlier studies (e.g., Aftab & Khatoon, 2012; Yu et al., 2016) that have found a significant difference between males and females with regard to teacher stress. In the present study, male teachers had higher mean scores in the aspects of teacher-to-teacher relationship and task overload, meaning that they reported being stressed more in these aspects. These results are similar to other studies (e.g., Aftab & Khatoon, 2012) showing that male teachers are more stressed than female teachers. Yu et al. (2016) also found a significant relationship between sex and teacher stress, although their results showed that female teachers had more social stress than male teachers. The results contradict certain other studies (e.g., Alson, 2019; Aydin & Kaya, 2016; Lasebikan, 2016; Pang, 2012) that have found that there is no significant difference between males and females regarding teacher stress.

The number of years of teaching experience was not significantly related to teacher stress. However, teachers generally scored relatively higher in the aspect of task overload. These results support some earlier studies (e.g., Pang, 2012; Yu et al., 2016) that have reported that there is no significant relationship between years of teaching and teacher stress, but contradict certain other the studies (e.g., Aydin & Kaya, 2016; Kavita & Hassan, 2018) that have found a significant relationship between years of teaching experience and teacher stress. Thus, there are competing explanations in this regard.

Regarding teachers' level of education, the teachers with higher levels of education were more stressed in the aspect of teacher-to-teacher relationship and administrative support. The results are contrary to a study by Shkëmbi, et al. (2015) that found that teachers with lower levels of education recorded higher level of stress. One possible explanation could be that teachers with a higher level of education, such as university degrees, find it more difficult to

successfully mingle with fellow Grade A certificate or diploma teachers. They may also have higher expectations, and thus find a less well paid job such as teaching unenjoyable.

With regard to teaching subject, the results indicated that being a social science major negatively predicted teacher stress in the aspect of teacher-to-teacher relationship only. This replicates earlier findings that showed a significantly higher mean score among teachers teaching science subjects compared with those teaching arts (Lasebikan, 2016). One possible explanation for this observation may be that science teachers spend much of their time with students doing scientific experiments. In the context of Tanzania, shortages of science and mathematics teachers normally lead to higher workloads among science and mathematics teachers, a condition that is expected to lead to teacher stress.

Class size also relates to teacher stress. In the present study, regression results indicated that class size positively predicted teacher stress in the aspects of administrative support and task overload. These results are similar to previous studies (Aftab & Khatoon, 2012; Luvinga, 2013; Pang, 2012) that have reported a significant relationship between class size and teacher stress. Similar to the present study, other studies have emphasised that large class size increases teacher stress in the aspect of task overload (McCarthy et al., 2016; Luvinga, 2013). In fact, when teachers deal with many students, they use much of their time dealing with the students' paperwork.

We also found that teachers' age had a negative significant relationship with administrative support, teacher-to-teacher relationship and task overload. This means that young teachers are more prone to these aspects of teacher stress. Similarly, studies (e.g., Yu et al., 2016) have reported that teachers under 40 years of age have more stress than older teachers. In contrast, other studies (e.g., Alson, 2019; Aydin & Kaya, 2016; Lasebikan, 2016) have observed that age has no significant relationship with teacher stress.

Finally, in the present study, the decision as to whether to leave or stay in the teaching profession was associated with teacher stress. The teachers who intended to leave teaching had relatively higher mean scores than those who intended to continue teaching in administrative support, teacher-to-teacher relationship and task overload. Given the fact that teaching is regarded as one of the most stressful professions (Kavita & Hassan, 2018; Shkëmbi et al., 2015; Yu et al., 2016), it is possible that it leaves many teachers under stress when deciding to quit or continue teaching.

Conclusion and recommendations

The purpose of the present research was to examine the extent of stress among primary school teachers, as well as examining the factors that influence stress among teachers in the Coastal Region of Tanzania. We hypothesised the observation of high levels of stress among teachers in all dimensions of teacher stress. However, we found that the teachers' stress ranged from low to moderate, and that the teachers scored relatively higher mean scores in individual items measuring the dimensions of working with students and task overload. Regarding the factors influencing stress among primary school teachers, the study produced mixed results, which suggests the need to conduct further research in order to investigate such results. From the findings and the discussion, the study concludes that there is a need for the government, policymakers and school administrators to reduce teachers' workload. Furthermore, school administrators should be supportive and should design mechanisms that could develop a sense of collegiality among teachers for the purpose of improving teacher-to-teacher relationships. Finally, based on the findings of this study, the following recommendations are offered: first, the claim that teachers with a higher level of education find it more difficult to successfully mingle with fellows Grade A certificate and diploma teachers should be tested in further research; second, given that this study was quantitative in nature, a qualitative inquiry is needed to explore teachers' conceptions of stress; third, a study that will validate instruments for measuring teacher stress in the context of Tanzania is of paramount importance.

References

Addison, A. K., & Yankyera, G. (2015). An investigation into how female teachers manage stress and teacher burnout: A case study of West Akim Municipality of Ghana. *Journal of Education and Practice*, *6*(10), 1–25.

Aftab, M., & Khatoon, T. (2012). Demographic differences and occupational stress of secondary school teachers. *European Scientific Journal*, *8*(5), 159–175.

Alhija, F. N.-A. (2015). Teacher stress and coping: The role of personal and job characteristics. *Procedia - Social and Behavioral Sciences*, *185*, 374–380. https://doi.org/10.1016/j.sbspro.2015.03.415

Alson, J. (2019). Stress among public school teachers. *Journal of Research Initiatives*, *4*(2), 1–5.

Ary, D., Jacobs, L. C., Sorensen, C. K., & Walker, D. A. (2010). *Introduction to research in education* (8th ed.). Wadsworth Cengage Learning.

Aydin, B., & Kaya, A. (2016). Sources of stress for teachers working in private elementary schools and methods of coping with stress. *Universal Journal of Educational Research*, *4*(12A), 186–195. https://doi.org/10.13189/ujer.2016.041324

Boniface, R. (2016). *Teachers' retention in Tanzanian remote secondary schools - Exploring perceived challenges and support*. Linnaeus University.

Chang, M. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review*, *21*, 193–218. https://doi.org/10.1007/s10648-009-9106-y

Chikoyo, R. A., Nzalayaimisi, G. K., & Telli, G. G. (2019). The influence of teachers' education qualifications on teacher attrition in public secondary schools of Kilimanjaro and Manyara regions, Tanzania. *Journal of Education and Practice*, *10*(33), 42-49. 10.7176/JEP/10-33-08

Freire, P. (2013). *Paulo Freire: Education for critical consciousness*. Bloomsbury Academic.

Greenberg, M. T., Brown, J. L., & Abenavoli, R. M. (2016). *Teacher stress and health: Effects on teachers, students and schools*. The Pennsylvania State University.

Hecker, T., Goessmann, K., Nkuba, M., & Hermenau, K. (2018). Teachers' stress intensifies violent disciplining in Tanzanian secondary schools. *Child Abuse & Neglect*, *76*, 173–183. https://doi.org/10.1016/j.chiabu.2017.10.019

Kavita, K., & Hassan, N. C. (2018). Work stress among teachers: A comparison between primary and secondary school teachers work stress among teachers. *International Journal of Academic Research in Progressive Education and Development*, *7*(4), 60–66. https://doi.org/10.6007/IJARPED/v7-i4/4802

Kayumba, T. D. (2017). *An assessment of stress factors affecting student-teachers in Tanzania: A case of Marangu teachers' college*. University of Dar es Salaam.

Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review*, *53*(1), 27–35. https://doi.org/10.1080/00131910120033628

Lasebikan, V. O. (2016). Expert panel's modification and concurrent validity of the Teacher Stress Inventory among selected secondary school teachers in Nigeria. *Psicologia: Reflexão e Crítica*, *29*, 1–7. https://doi.org/10.1186/s41155-016-0047-3

Luvinga, C. S. (2013). *The magnitude and impact of occupational stress among secondary school teachers in Kinondoni municipality*. The Open University of Tanzania.

McCarthy, C. J., Lambert, R. G., Lineback, S., Fitchett, P., & Baddouh, P. G. (2016). Assessing teacher appraisals and stress in the classroom: Review of the classroom appraisal of resources and demands. *Educational Psychology Review*, *28*(3), 577–603. https://doi.org/10.1007/s10648-015-9322-6

MoEVT. (2007). *The teacher education development and management strategy-2007/08 to 2010/11*. Dar es Salaam.

MoEVT. (2009). Educational for All report for Tanzania mainland. Education for All 2015 national review. Dar es Salaam.

Meng, L., & Liu, S. (2008). Mathematics teacher stress in Chinese. *Journal of Educational Enquiry*, *8*(1), 73–96.

Mintz, J. (2007). Psychodynamic perspectives on teacher stress. *Psychodynamic Practice*, *13*(2), 153–166. https://doi.org/10.1080/14753630701273074

Mkumbo, K. (2014). Prevalence of and factors associated with work stress in academia in Tanzania. *International Journal of Higher Education*, *3*(1), 1–11. https://doi.org/10.5430/ijhe.v3n1p1

Moracco, J., Danford, D., & D'Arienzo, R. V. (1982). The factorial validity of the Teacher Occupational

Stress Factor Questionnaire. *Educational and Psychological Measurement*, *42*, 275–283. https://doi.org/10.1177/0013164482421034

Pang, I. W. (2012). Teacher stress in working with challenging students in Hong Kong. *Educational Research for Policy and Practice*, *11*(2), 119–139. https://doi.org/10.1007/s10671-011-9109-6

Rafiq, R., & Shah, P. A. (2015). Teachers' role and stress relationship: A review. *International Journal of Human Resource and Industrial Research*, *2*(3), 8–17.

Ryan, S. V., von der Embse, N. P., Pendergast, L. L., Saeki, E., Segool, N., & Schwing, S. (2017). Leaving the teaching profession: The role of teacher stress and educational accountability policies on turnover intent. *Teaching and Teacher Education*, *66*, 1–11. https://doi.org/10.1016/j.tate.2017.03.016

Shkëmbi, F., Melonashi, E., & Fanaj, N. (2015). Workplace stress among teachers in Kosovo. *SAGE Open*, 1–8. https://doi.org/10.1177/2158244015614610

UNESCO, (2010). *World data on education* (7th ed.). UNESCO-International Bureau of Education.

von der Embse, N. P., Sandilos, L. E., Pendergast, L., & Mankin, A. (2016). Teacher stress, teaching-efficacy, and job satisfaction in response to test-based educational accountability policies. *Learning and Individual Differences*, *50*, 308–317. https://doi.org/10.1016/j.lindif.2016.08.001

Weinstein, T. L., & Trickett, E. J. (2016). The development of an instrument to measure English Language Learner (ELL) teacher work stress. *Teaching and Teacher Education*, *55*, 24–32. https://doi.org/10.1016/j.tate.2015.12.001

Wengel, K., Szefczyk-Polowczyk, L., & Zygmunt, A. (2015). *Stress in the teaching profession*. *5*(6), 191–210. https://doi.org/10.5281/zenodo.18491

Yu, G., Dong, Y., Wang, Q., & An, R. (2016). Reducing teacher stress: Improving humanized management of Chinese teachers. *Journal of Chinese Human Resource Management*, *7*(2), 82–99. https://doi.org/10.1108/JCHRM-07-2016-0014

Biographical note

Patrick Severine Kavenuke, PhD, is a lecturer in Educational Foundations, Management and Lifelong Learning department at Dar es Salaam University College of Education, University of Dar es Salaam. His main areas of research are: teacher education, critical pedagogy, critical thinking skills in students, international and comparative education, and teacher professional development.

Joel Jonathan Kayombo, PhD, is a lecturer in Educational Foundations, Management and Lifelong Learning department at Dar es Salaam University College of Education, University of Dar es Salaam. His research interests include teacher education, sociology of higher education, and educational leadership and policy studies.

Mjege Kinyota, PhD, is a lecturer in Educational Psychology and Curriculum Studies department at Dar es Salaam University College of Education, University of Dar es Salaam. His research interests include teacher education, STEM education, gender in STEM, environmental education, international and comparative education, and social justice education.

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Quality Pedagogical Practice in Early Childhood Education Institutions Relating to Children at Risk of Social Exclusion

Sandra Antulić Majcen*[1] and Maja Drvodelić[2]

Quality early childhood education and care has been the focus of interest of researchers for over half a century. Approaches to the quality monitoring and quality assurance of early childhood education and care, as well as its conceptualisation and operationalisation, have changed and developed over the decades in line with contemporary understandings of child development and learning, and in accordance with changes in the purpose and functions of early childhood education and care. The results of many relevant studies confirm that quality early childhood education and care is crucial for short-term and long-term positive outcomes in different development and learning areas, especially in the case of disadvantaged children, including children at risk of social exclusion. The aim of this paper is to present the concept of quality in early childhood education and care from various research perspectives, with special emphasis on a review of the literature on the quality of pedagogical practice aimed at children at risk of social exclusion. The paper presents the theoretical model of responding to the needs of children at risk of social exclusion in Croatian early childhood education and care. Special attention is given to the quality of pedagogical practice regarding children at risk of social exclusion, as a prerequisite for planning targeted measures and interventions directed at this group of children and their families within the Croatian early childhood education and care system. It was concluded that the key factors for quality pedagogical practice are an interdisciplinary approach of highly qualified professionals and the participation of all key stakeholders within the child's immediate environment, as well as connection between relevant policies and practice, which are crucial for early childhood education and care quality.

Keywords: children at risk of social exclusion, early childhood education and care, quality pedagogical practice

1 *Corresponding Author. Research and Development Department, National Centre for External Evaluation of Education, Croatia; sandra.antulic.majcen@ncvvo.hr.

2 Department of Pedagogy and Didactics, Faculty of Teacher Education, University of Zagreb, Croatia.

Kakovostna pedagoška praksa v ustanovah predšolske vzgoje in otroci, ki jim grozi socialna izključenost

Sandra Antulić Majcen in Maja Drvodelić

Kakovostna predšolska vzgoja in varstvo sta v središču zanimanja raziskovalcev že več kot pol stoletja. Pristopi k spremljanju in zagotavljanju kakovosti predšolske vzgoje in varstva ter njena konceptualizacija in operacionalizacija so se skozi desetletja spreminjali in razvijali skladno s sodobnim razumevanjem otrokovega razvoja in učenja ter s spremembami namena in funkcij predšolske vzgoje in varstva. Izsledki številnih relevantnih študij potrjujejo, da sta kakovostna predšolska vzgoja in varstvo ključnega pomena za kratkoročne in dolgoročne pozitivne rezultate na različnih področjih razvoja in učenja, zlasti pri prikrajšanih otrocih, vključno z otroki, ki jim grozi socialna izključenost. Namen prispevka je predstaviti koncept kakovosti v predšolski vzgoji in varstvu z različnih raziskovalnih vidikov, s posebnim poudarkom na pregledu literature o kakovosti pedagoške prakse, namenjene otrokom, ki jim grozi socialna izključenost. V prispevku je predstavljen teoretični model odzivanja na potrebe otrok, ki jim grozi socialna izključenost, v hrvaški predšolski vzgoji in varstvu. Posebna pozornost je namenjena kakovosti pedagoške prakse pri otrocih, ki jim grozi socialna izključenost, kot predpogoju za načrtovanje ciljno usmerjenih ukrepov in intervencij, namenjenih tej skupini otrok in njihovim družinam v hrvaškem sistemu predšolske vzgoje in varstva. Ugotovljeno je bilo, da so ključni dejavniki za kakovostno pedagoško prakso interdisciplinarni pristop visokousposobljenih strokovnjakov in sodelovanje vseh ključnih deležnikov v otrokovem neposrednem okolju ter povezava med ustreznimi politikami in prakso, ki so temeljnega pomena za kakovost predšolske vzgoje in varstva.

Ključne besede: otroci, ki jim grozi socialna izključenost, predšolska vzgoja in varstvo, kakovostna pedagoška praksa

Introduction

The specific characteristics of the learning and development of children of early and preschool age require a high-quality early childhood education and care (ECEC) system. The UN Convention on the Rights of the Child (1989) emphasises the right of every child to education on the basis of equal opportunities for all children regardless of their developmental and health status, culture and other characteristics.

A range of longitudinal studies (e.g., Campbell et al., 2002; Lowe Vandell et al., 2010; Schweinhart et al., 2005; Sylva et al., 2004; Sylva et al., 2008) have confirmed the importance of ECEC in the context of the short- and long-term effects on child development and learning. The knowledge gained in these studies has led to a systematic approach to monitoring and improving the quality of ECEC as an important and equal aspect of education policies in an international society (OECD, 2001, 2006, 2011).

Having recognised the importance of providing high-quality preschool education, the European Commission issued the Proposal for Key Principles of a Quality Framework for ECEC (European Commission, 2014), which includes ECEC quality standards grouped within five dimensions: 1. Access (ECEC that is available and affordable for all families and their children, encouraging participation, fostering social cohesion and embracing diversity); 2. The ECEC workforce (with initial and continuing training, and supportive working conditions); 3. Curriculum (a holistic approach to child development, cooperation and reflection); 4. Monitoring and evaluation (awareness of quality that is in the best interest of the child) 5. Governance and funding (responsibility and cooperation between various stakeholders and policy makers, and right of access to funding). The Council Recommendation of 22 May 2019 on High-Quality ECEC Systems (Official Journal of the European Union, 2019/C 189/02; Recital 4) also emphasises that "participating in ECEC is beneficial for all children and especially for children in a disadvantaged situation". In this context, it is particularly important to provide high-quality education at this level.

It is well known that inclusive pedagogical practice is an important compensatory tool that reduces the risk of social exclusion (RSE) for children (Balladares & Kankaraš, 2020; Frazer & Marlier, 2014; Geddes et al., 2011). Understanding the concept of quality with regard to children at RSE facilitates the prompt identification of children at risk and the adaptation of pedagogical practice to their specific needs. For example, Smith (2020, p. 199) highlights the fact that the ECEC "workforce must be prepared to work more effectively with diverse group of families […] as early identification and intervention can

offset future, and worsening, outcomes". Only a quality environment provides the conditions for the proper development and learning of every child, especially for children at RSE. Such an environment is able to respond to the needs of children at the most sensitive age, and thus to contribute to their long-term wellbeing (Campbell et al., 2002; Lowe Vandell et al., 2010; Schweinhart et al., 2005). Until now, there has been no systematic research in the Republic of Croatia on the role and potential of ECEC institutions concerning the RSE of children, especially research that deals with the quality of pedagogical practice. The scientific project of the Croatian Science Foundation entitled Models of Responding to the Educational Needs of Children at Risk of Social Exclusion in ECEC Institutions is devoted to this topic. Relevant data specifically concerning the phenomenon of the social exclusion of young and preschool children in Croatia, and on the capacities of institutions to respond to it, will be gathered as part of this project.

The purpose of this paper is to present the theoretical model of responding to the needs of children at RSE in Croatian ECEC. This will be achieved by presenting the concept of quality in ECEC, with special emphasis on a review of the literature on the quality of pedagogical practice aimed at children at RSE. Special attention is given to the quality of pedagogical practice regarding children at RSE as a prerequisite for planning targeted measures and interventions directed at this group of children and their families within the Croatian ECEC system.

Children at risk of social exclusion (RSE) in the context of the quality of ECEC

The risk of social exclusion is a broad term, the interpretation of which depends on the selected approach and the scientific discipline explaining it. However, all authors agree that the risk of social exclusion of children may lead to undesirable outcomes later in life, both at the level of adjustment to social norms, and at the level of psychosocial functioning (Sabates & Dex, 2015).

Within the project of the Croatian Science Foundation entitled Models of Responding to the Educational Needs of Children at RSE in ECEC Institutions (Bouillet & Domović, 2021), social exclusion of children is understood as a multidimensional concept including economic, social, cultural, health and other aspects of disadvantage and deprivation, which individually or combined can have an unfavourable effect on the current life and development of a child, as well as on the child's development and on disadvantaged life chances in adult life. The most frequently mentioned risks of social exclusion of the child are poverty, mental illness of parents, inadequate parental care, migrations, neglect

and abuse, and premature childbirth (Sabates & Dex, 2015), where a higher number of risk factors increases the likelihood of social exclusion of children (Cernigila et al., 2018; Reiss, 2013). Examples of social exclusion of children in early and preschool age include exclusion from social activities (e.g., parties, excursions, sporting and other activities), from services in the community (e.g., libraries, public transport, cultural, art and sports societies), and from education and care institutions (e.g., due to shortages in personnel, technology, support or funding).

Some of the earliest studies of quality specifically examined the quality of ECEC programmes aimed at groups of underprivileged children. Lazar's meta-analysis (1977) summarises the results of fourteen longitudinal studies conducted since the end of the 1950s that analysed the effect of ECEC experimental programmes aimed at children with low socioeconomic status (e.g., Philadelphia Project, Institute for Developmental Studies, Early Training Project, Perry Preschool Project, Head Start & Follow Through New Heaven Study, etc.). One of the key findings of this meta-analysis confirmed the positive effects of ECEC programmes on adjustment to, and success in, primary school education. It was confirmed that in order to have positive effects, ECEC programmes must be well designed and well implemented (Lazar, 1977). The Perry Preschool Project longitudinal study, which was conducted from 1962 to 2002 on a sample of 123 children from underprivileged families, monitored the effects of a high-quality preschool programme. The study confirmed the positive effects of the programmes, which were sustained to adulthood, and favourable effects on society as a whole were also documented (Barnett, 1985; Schweinhart et al., 2005; Schweinhart, 2003).

Concerning disadvantaged children, the findings of an EPPE longitudinal study (Effective Provision of Pre-School Education: 1997–2003; Sylva et al., 2004) confirm that the wellbeing of children at RSE is significantly conditioned by the quality of the experience at an early and preschool age, with the effect of quality ECEC being greater when the number or complexity of risk factors to which the children are exposed is higher. With regard to children at RSE, the EPPE study confirms that quality ECEC, although unable to remove the circumstances leading to the risk, can help reduce the disadvantaged position of these children. For example, Melhuish et al. (2019) show that the risk of developing cognitive difficulties can be reduced by 40–60% and the risk of developing socio-emotional difficulties by 10–30% in children who attend high-quality ECEC. This effect can last all the way to the children's adolescence. Hall et al. (2009) found that the global quality of ECEC moderates the effects of family risk factors (e.g., poverty), while the quality of the relationship between the

ECEC personnel and the children moderates risk factors at the level of the child (e.g., neurodevelopmental risks, developmental disorders). The quality of the curriculum and of the education process moderates the effects of both risk factor groups. Furthermore, Sammons et al. (2015, p. 3) consider that "early years and primary school experiences, along with better home learning environments in the early years and up to the age of seven, provide a significant boost in attainment for children at the age of 11 and help to counteract disadvantage".

Although there is a large amount of scientific evidence to show that participating in quality ECEC makes a difference in the quality of life of disadvantaged children, contemporary societies are still faced with the insufficient availability of such programmes for children and families exposed to various risks of social exclusion. Comparative international studies (OECD, 2016) show that children are much more often included in ECEC programmes if they belong to families with above average socioeconomic status, while children from families with an underprivileged socioeconomic status are more frequently left outside these programmes (regardless of the child's age). Jager (2016) noticed a high percentage of children at risk in early childhood education, yet only a third of them have adequate pedagogical support, suggesting that the quality of early education in relation to the risk of social exclusion needs further research. A recent study by the UNICEF Office for Croatia (2020) has shown that every third child is enrolled in the ECEC system, and this ratio diminishes when children at risk of social exclusion are involved. Hence, ECEC enrolment is only 42% in low-populated areas, 31% in underdeveloped regions, and 18% for children within the Roma population in Croatia. According to Bouillet (2018), the greatest administrative obstacles to the accessibility of ECEC for children at RSE in Croatia are insufficiently developed systems for registering children in early and preschool age, relying on parents' initiative to protect children's rights, the criteria for the enrolment of children in ECEC programmes (which are biased towards children of working parents), absence of organised transportation to/from the ECEC institution, and underdeveloped alternative ECEC programmes for children who are not enrolled in an ECEC institution. On a national level, as well as on regional and local levels, there are no standardised mechanisms of intersectoral cooperation and exchange of information regarding ECEC, which leads to the invisibility of children at RSE.

There is a clear need to invest additional efforts in coordinating the Croatian ECEC system with the needs of children at RSE, as the system is not sufficiently accessible to many children. The accessibility of high-quality ECEC is therefore one of the strategic goals of the Republic of Croatia by 2030 (National Development Strategy of the Republic of Croatia until 2030, 2021).

ECEC institutions are expected to ensure greater accessibility, quality and fairness of services in order to encompass more children at RSE. Insufficient access to ECEC for these children poses significant risks to their development and has a detrimental effect on society as a whole (Campbell-Barr & Nygård, 2014; Das et al., 2018). However, decisionmakers, parents, ECEC professionals, directors of institutions and experts have different definitions of this complex social problem and approaches to resolving it (Van Dyke, 2017). Thus, a comprehensive and effective solution is yet to be found. There is no doubt that part of the problem lies in the insufficient and unequal knowledge of the methods of developing accessible, inclusive and high-quality pedagogical practice.

Quality ECEC pedagogical practice with regard to children at risk of social exclusion (RSE)

Considering the context and complexity of the education process, quality may be operationalised as a multidimensional concept (Donabedian, 1980, according to Sheridan, 2007) or as a "multifaceted construct" (Graue, 2005, according to Dalli et al., 2011, p. 34). The quality concept may be operationalised as a "cultural construction" (Woodhead, 1996, p. 10) that changes in a specific context and under specific circumstances. This supports the fact that quality is a dynamic rather than a static concept (Dahlberg et al., 1999; Moss & Pence, 1994; Moss, 1994). The concept of quality is defined as a relative concept, and not as an objective reality (Moss & Pence, 1994; Moss, 1994; Woodhead, 1996).

The quality of ECEC can be operationalised as a multidimensional concept with three key dimensions: structure, process and outcome (Donabedian, 1980, according to Sheridan, 2007). Structural quality includes the characteristics of the programme, the environment, the equipment, and other aspects of the ECEC institution, such as the number of children in the educational group, the teacher-child ratio, the material equipment in the institution, the level of training of the professional staff, etc. (Moss et al., 2003; Pascal et al., 2012). According to data provided by the OECD (2001, 2006, 2011), this belongs to one of the most frequently applied approaches to assessing the quality of ECEC. Process quality includes the interactions of the participants involved (children and adults), the culture of the organisation, the management of the organisation, the curriculum, the education process, etc. (Moss et al., 2003; Shonkoff & Phillips, 2000; Wangmann, 1995). Dunn (1993) defines process determinants as the child's direct experiences that include the specific and dynamic characteristics of the environment, such as child-teacher interactions, values, goals, leadership, etc., thus providing a broader framework for observing the process.

Quality operationalised in terms of educational outcomes relies on the assumption that a higher level of quality leads to better educational outcomes and to the better preparedness of the child for school (McQuail et al., 2002; Peisner-Feinberg et al., 1999). The present paper focuses on the elaboration of the process dimensions of ECEC quality, with emphasis on quality ECEC pedagogical practice with regard to children at RSE.

The ISSA approach, which is focused on process determinants of ECEC quality (International Step by Step Association, 2010), operationalises the quality of pedagogical practice through seven quality areas: 1) Interactions, 2) Family and Community, 3) Inclusion, Diversity and Values of Democracy, 4) Assessment and Planning, 5) Teaching Strategies, 6) Learning Environment, and 7) Professional Development. These quality areas are based on a humanist and socio-constructivist paradigm, and the fundamental starting point is developmentally appropriate practice and an individualised approach to children and learning through interactions and dialogue between children, and between children and adults. The fundamental principles include mutual understanding and respect, embracing diversity and ensuring social inclusion. In this approach, the quality of pedagogical practice is considered a key factor in shaping relationships, interactions and the context within which the child learns and develops (Tankersley & Ionescu, 2016).

The ISSA standards of quality (International Step by Step Association, 2010; Tankersley & Ionescu, 2016) place a great deal of emphasis on purposeful, reciprocal, warm and responsive interactions that support children's needs, along with partnership between teachers, ECEC institutions, families and the local community, with special emphasis on embracing and respecting diversity. Partnership with parents includes providing support, effective communication, and exchange of information about children, as well as parental engagement in the curriculum decision-making process. Quality pedagogical practice stems from monitoring the degree of participation and involvement of children in activities, in order to provide a stimulating environment for development and learning. Teaching strategies focus on setting high but attainable goals by encouraging curiosity, research, critical thinking and cooperative behaviour, as well as openness and respect for diversity. Moreover, it is important to ensure a physically and psychologically safe and stimulating environment that offers appropriate activities, materials and stimuli to encourage children to engage in research, play and interactions, both indoors and outdoors. Finally, high-quality professional development, in addition to continuous evaluation and self-evaluation, is the foundation for assuring quality development and learning for every child (International Step by Step Association, 2010; Tankersley & Ionescu, 2016).

The ISSA definition of quality pedagogical practice "reflects a strong belief that a teacher's role is to provide maximum support to each child in its development into a strong, confident, caring, responsible and happy member of our society. As such, it is founded on beliefs which include child-centred teaching, the need to develop strong partnerships with families and communities, and teachers as advocates of quality education and care for every child" (Tankersley et al., 2012, p. 3). This provides a comprehensive and clear foundation for ensuring a quality environment for the development and learning of children at RSE.

Starting from Bronfenbrenner's ecological systems (1979), and in the context of the interactional perspective of pedagogical quality, Sheridan (2001) points out that the quality of pedagogical practice relates not only to the level at which the context of the education institution has a positive effect on the growth and development of the individual, but also to the degree to which the individual can affect and change the context that surrounds him or her, as well as the degree to which the individual can manage his or her own learning process.

Several case studies have been conducted with a view to providing an insight into the quality of pedagogical practice. They have identified six areas that are particularly important for the quality of work with children at early and preschool age (Sylva et al., 2004): 1) quality of adult-child verbal interactions, 2) initiating activities, 3) knowledge and understanding of the curriculum, 4) knowledge of the child learning and development process, 5) adult skills to support children, 6) a high degree of parental engagement in the children's learning process, and 7) supporting children with strategies to manage their own behaviour.

Research recognises ECEC teacher-child interactions as the most salient component of ECEC quality in terms of children's social-emotional functioning, which is of high importance for children in RSE (Blewitt et al., 2020). The quality of adult-child interactions includes cooperation in resolving problems, explaining concepts and evaluating activities, whereby teachers ask open-ended questions and provide clear feedback to children's behaviour. It is extremely important that adult-child interaction, especially when it involves the child and the ECEC teacher, is responsive, easily accessible and warm (Melhuish, 2004). It has also been shown that it is particularly important to provide children with freedom of choice (Sandseter & Seland, 2016). Sylva et al. (2004) stress the need for uniformity between the activities initiated by the child and those initiated by the teacher. In this sense, interventions initiated by the teacher must focus on enhancing the learning process, and on initiating group work and cooperative learning.

Hamre et al. (2014) suggest a general dyadic systems-level property of ECEC's teacher-child interaction that includes responsive teaching, active engagement, cue detection, contingent responding, domain-specific elements of

teacher-child interactions, motivation-inducing supports, management and routines, and the facilitation of cognition. However, Bulotsky-Shearer et al. (2020, p. 2) emphasise that "in accord with an ecological perspective and person by environment model, individual children may vary in their reactions to the same environment and different environments may produce the same outcome for different children […] it is critical to examine the interaction between children's behavioural risks and teacher-child interaction quality". This includes a positive and active approach to behaviour guidance with the aim of encouraging children to achieve success, develop positive self-esteem and increase competence (Blewitt et al., 2020). It is important to acknowledge Vygotsky's zone of proximal development in ECEC teacher-child interactions, whereby children's abilities are challenged to stimulate learning in relation to their current level of knowledge and skills (Kievik et al., 2020). For children at RSE, the availability of ECEC institutions to parents is particularly important. A high degree of parental engagement in the learning process implies an effective exchange of information on the child, involvement in decision-making about the curriculum, and the alignment of common goals connected to the child's education and care (Goodal, 2018; Ferreira et al., 2018; Melhuish, 2004; Sylva et al., 2004).

An important precondition of quality pedagogical practice is structural quality conditions, such as the number of children per teacher and the size of the educational group (Melhuish, 2004), as well as supportive working conditions (Nasiopoulou et al., 2021). In addition, the level and effectiveness of the education and training of ECEC teachers, their devotion to the job, and continuous professional development are strongly connected with the quality of pedagogical practice (Melhuish, 2004; Nasiopoulou et al., 2021; Peeters & Sharmahd, 2014). Continuous professional development based on the active engagement of ECEC teachers, and on peer exchanges within a shared scientific framework, are the most effective (Peleman et al., 2018).

Model of responding to the needs of children at risk of social exclusion in Croatian ECEC

The scientific project of the Croatian Science Foundation entitled Models of Response to Educational Needs of Children at Risk of Social Exclusion in ECEC Institutions is focused on the quality of educational practice and on creating prerequisites for implementing appropriate responses of ECEC institutions to the educational needs of children at RSE in Croatian ECEC.

Croatian ECEC is regulated by the Preschool Education Act (1997) and accompanying secondary legislation. ECEC functions as a unitary system and

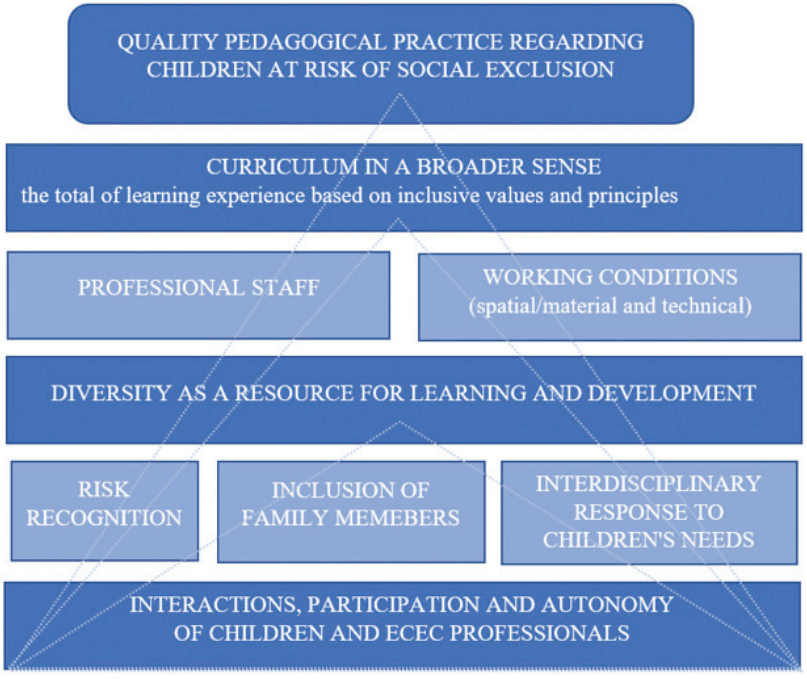
includes the upbringing, education and care of young and preschool children (from the age of 6 months to school age at 6 (7) years). Croatian ECEC comes under the auspices of the Ministry of Science and Education (MSE), which provides nationwide guidance and a framework for the accreditation and monitoring of educational provision. From an operational perspective, the system is highly decentralised, and the funding and management of provision is the responsibility of local authorities. General objectives and principles across all sectors of the education system include: children's right to high-quality education, equality of educational opportunities, acquisition of key competencies as a right and obligation, inclusion, democracy, and pluralism in institutional forms and pedagogical programmes (Bouillet 2018a; Eurydice 2021). Bouillet (2018) confirms that a change of the ECEC system in Croatia is needed in several aspects, specifically: the conditions in which ECEC is performed, the content offered in ECEC, ECEC programme quality assurance, and reduction in the requirements that children at RSE and their parents need to meet in order to access an ECEC programme. Antulić Majcen and Pribela-Hodap (2017) demonstrated the clear need for additional support of ECEC teachers and institutions in the educational area, especially regarding inclusive educational practice, as well as the need for an additional systemic approach regarding advancements in the quality, research, development and topicality of quality in ECEC. The model is therefore oriented towards the key components of ECEC in Croatia that need improvement regarding the response to the needs of children at RSE in the Croatian ECEC setting.

The model is based on the on Bronfenbrenner's ecological system theory (1979) and the ISSA approach (International Step by Step Association, 2010; Tankersley & Ionescu, 2016). It implies the implementation of national and international inclusive education policies in the immediate educational practice by ECEC professionals aimed at children at RSE. Such practice includes the collaboration of an interdisciplinary team of experts (ECEC teachers, psychologists, pedagogues, educational rehabilitators, etc.) who can recognise the needs of children and their families. The underlying assumption is that an ECEC institution, in cooperation with local governance bodies, ensures ECEC availability mechanisms regardless of their developmental, familial, social and other attributes. This implies the need to ensure structural determinants of quality (i.e., the number of children per ECEC teacher, group size, spatial/material and technical working conditions) in order to enable quality educational practice regarding children at RSE. Since the MORENEC project is focused on practice, the model aims to define process determinants of quality that are focused on the quality of interactions between ECEC teachers and children, parents/legal

guardians, co-experts, other professionals and the local community, which implies highly qualified professional staff. The microsystem and the exosystem (Bronfenbrenner, 1979) for a child at RSE are defined according to these principles (Figure 1).

Figure 1

The model of quality pedagogical practice for children at risk of social exclusion



Pedagogical practice in Croatia is defined by the National Curriculum for Early Childhood and Preschool Education and Care (2015), which highlights the need to respect differences in children. The principles include the flexibility of the educational process; partnerships between the kindergarten, parents and the local community; ensuring continuity of education and care; and openness for continual learning and improvement of practice. Key values emphasised are: knowledge, humanism and tolerance, identity, responsibility, autonomy and creativity. The general goals of ECEC are to ensure the child's wellbeing and his or her entire development, upbringing, learning and competence development.

Staff professionalism should be achieved through a high level of education of ECEC teachers, positioned on ISCED level 7. However, their profession

is not regulated, and the institutions responsible for their education have different study programmes, resulting in different competences. Coordinating these study programmes is a prerequisite for ensuring highly trained teachers who possess a knowledge of child learning and development paradigms, and are capable of recognising and responding to the needs of a child at RSE.

Inadequacies within the initial education of ECEC teachers are somewhat compensated for later through continuous professional development, led by the Education and Teacher Training Agency (ETTA). With regard to ECEC teachers, however, research points to the absence of lifelong learning activities aimed at building and strengthening their competences in working with children at risk of social exclusion (Antulić Majcen & Pribela-Hodap, 2017, Bouillet, 2018). Through improvements and systematisation of the continuous professional development and training of ECEC teachers, as well as the continuous review of pedagogical practice (e.g., through reflection, self-evaluation and evaluation), skills for moderating purposeful, reciprocal and responsive interactions concerning children would be ensured as important elements of a quality pedagogical practice.

Spatial/material and technical working conditions are defined in the State Pedagogical Standard of Preschool Education, and are the responsibility of the founders of each ECEC institution (owned by natural persons, religious groups or non-governmental organisations). In this context, the founders are directly responsible for accessibility and affordability as components of access to ECEC institutions. This is linked to the number and size of ECEC institutions in the local community, the amount of co-financing of the costs of attending ECEC, the enrolment policy (e.g., enrolment priorities), and to identifying the needs of children and parents. Therefore, the local community has the responsibility to provide instruments and measures of support to parents of children at RSE. Research points to significant regional differences in founders' opportunities to meet the established standards (Bouillet, 2018, Dobrotić et al., 2018).

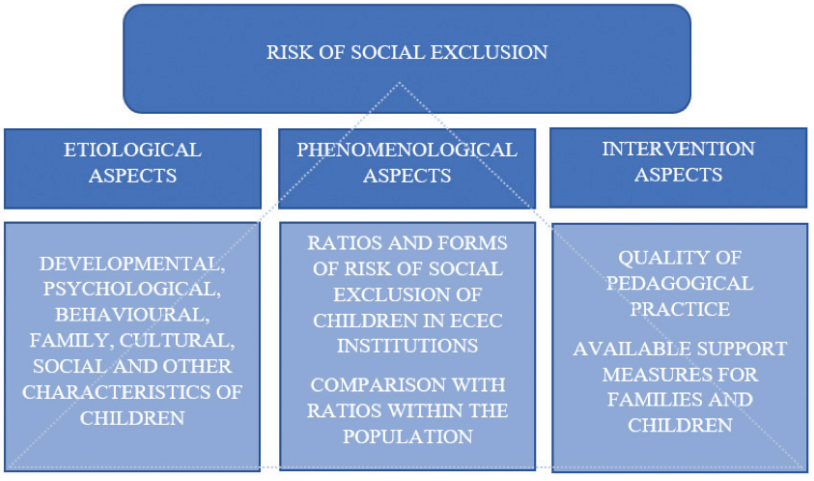
It can be concluded that, on the national level, the ECEC system recognises the rights of children at RSE, but it all depends on the personal views and competences of ECEC teachers. The purpose of the present project is to ensure that each ECEC teacher, within his/her institution, guarantees the participation, interaction and autonomy of children and professionals.

Hence, the main objective of the proposed research project MORENEC is to contribute to the systematisation of current scientifically based findings and the development of new findings regarding etiological, phenomenological and intervention aspects of risks of social exclusion among children in early and preschool years. In relation to the research objective, three key aspects of

the risk of social exclusion are recognised: a) etiological, which includes developmental, psychological, behavioural, family, cultural, social and other characteristics of children; b) phenomenological, which includes an analysis of ratios and forms of risk of social exclusion of children in ECEC institutions and comparison with ratios within the population (outside the ECEC system); and c) intervention, which includes quality pedagogical practice, available support measures for families and children, and elements of successful support models (Figure 2). The objective will be achieved by analysing the aspects of risks of social exclusion of children through establishing the proportion of children at risk of social exclusion, characteristics of educational practices (i.e., quality pedagogical practice) directed to this group of children, and available measures of educational support and professional treatment for these families and children. The results will enable a comparative and critical analysis of the inclusivity of ECEC institutions.

Figure 2

Research goals regarding etiological, phenomenological and intervention aspects of risk of social exclusion of children of early and preschool age



Relevant data on the actual phenomenon of social exclusion of young and preschool children in Croatia, and on the capacities of institutions to respond to it, will be gathered as part of this project. The model presented in this paper is focused on quality pedagogical practice for children at RSE and is one of the project's theoretical frameworks of responding to the needs of children at RSE in Croatian ECEC. By applying the suggested model, the intention is

to reach synergy within the system, in order to achieve a holistic approach in recognising and responding to the needs of children at risk of social exclusion. In short, to apply this model implies the following: close cooperation between systems, availability of scientifically based models of work with children and their families, and a high level of professionalism of all experts involved, without which it is impossible to ensure the quality of various services. All of these components can and must be developed with the systemic support of all stakeholders within education policy, and with the engagement of the professional community. This represents a serious and substantial reorganisation of current services aimed at children and their families within all operational segments, especially in segments that ensure the quality of pedagogical practice, that is, the quality of ECEC for all children of early and preschool age.

Conclusion

The purpose of the present paper was to present a theoretical model of responding to the needs of children at RSE in Croatian ECEC. Children at RSE are those who are experiencing economic, social, cultural, health and other aspects of disadvantage and deprivation, which individually or combined can have an unfavourable effect on their current life and development, as well as on their life chances in adult life (Bouillet & Domović, 2021). Risks of social exclusion can be the consequence of the conditions in which a child grows up and develops, or of various developmental specificities. The cumulative effects of the risk of social exclusion have multiple negative effects on the quality of life and development of young and preschool children, which shows that there is a need to approach the development rights of children from the aspect of their multidimensionality, mutual dependence and cumulative effect on the quality of children's life as they grow up (Farkas, 2014). Without additional support and professional help, children at risk of social exclusion have very few opportunities to grow up successfully, because, regardless of the problems they face, these factors generally significantly reduce the children's chances of achieving satisfactory academic and social development.

It is therefore imperative to provide access to high-quality ECEC institutions and quality pedagogical practice in order to ensure compensatory mechanisms that can reduce the risk of children's social exclusion. Understanding the concept of quality when it comes to children at risk of social exclusion enables such children to be promptly identified and pedagogical practice to be adjusted to their specific needs. This provides a quality environment to secure the conditions for the quality development and learning of every child and to cater for

their needs at their most vulnerable age, thus contributing to their quality of life in the long term.

The model of quality pedagogical practice for children at risk of social exclusion presented in the present paper emphasises the importance of the implementation of national and international inclusive education policies in the immediate educational practice by ECEC professionals aimed at children at RSE. In order to implement this model, close cooperation is needed between stakeholders at all levels of the education system. It is also crucial to ensure the availability of scientifically based models of work with children and their families, and to guarantee a high level of professionalism of all of the experts involved. All of these components can and must be developed with the systemic support of all stakeholders within education policy, and with the engagement of the professional community. A serious and substantial reorganisation of current services for children and their families is needed. This should involve a significant change within all operational segments, especially within segments that ensure the quality of pedagogical practice, that is, the quality of ECEC for all children of early and preschool age.

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References

Antulić Majcen, S., & Pribela-Hodap, S. (2017). *Prvi koraci na putu prema kvaliteti: Samovrednovanje ustanova ranoga i predškolskoga odgoja i obrazovanja* [First steps towards quality: Self-evaluation of ECEC institutions]. National Centre for External Evaluation of Education.

Balladares, J., & Kankaraš, M. (2020). Attendance in early childhood education and care programmes and academic proficiencies at age 15. *OECD Education Working Papers No. 214.* OECD Publishing.

Barnett, W. S. (1985). The Perry Preschool Program and its long-term effects: A benefit-cost analysis. *High/Scope Early Childhood Policy Papers*, 2. High/Scope Educational Research Foundation.

Blewitt, C., Morris, H., Nolan, A., Jackson, K., Barrett, H., & Skouteris, H. (2020). Strengthening the quality of educator-child interactions in early childhood education and care settings: A conceptual model to improve mental health outcomes for pre-schoolers. *Early Child Development and Care, 190*(7), 991–1004. https://doi.org/10.1080/03004430.2018.1507028

Bouillet, D., & Domović, V. (2021). Socijalna isključenost djece rane i predškolske dobi: konceptualizacija, rizici i model intervencija [Social exclusion of children in early and preschool age:

Conceptualisation, risks and intervention]. *Ljetopis socijalnog rada*, *28*(1), 71–96.

Bouillet, D. (2018). *Another site of inclusion of children in early and preschool age: Report on analysis on equity issues regarding access to quality early and preschool education to children in a vulnerable situation in Croatia*. UNICEF Office for Croatia.

Bouillet, D. (2018a). Croatia – ECEC workforce profile. In P. Oberhuemer & I. Schreyer (Eds.), *Early childhood workforce profiles in 30 countries with key contextual data* (pp. 126–155). Staatsinstitut für Frühpädagogik. www.seepro.eu/ISBN-publication.pdf

Bulotsky-Shearer, R. J., Fernandez, V. A., Bichay-Awadalla, K., Bailey, J., Futterer, J., & Qi, C. H. (2020). Teacher-child interaction quality moderates social risks associated with problem behavior in preschool classroom contexts. *Journal of Applied Developmental Psychology*, *67*, 101103.

Campbell, F. A., Ramey, C. T., Pungello, E., Sparling, J., & Miller-Johnson, S. (2002). Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science*, *6*(1), 42–57.

Campbell-Barr, V., & Nygård, M. (2014). Losing sight of the child? Human capital theory and its role for early childhood education and care policies in Finland and England since the mid-1990s. *Contemporary Issues in Early Childhood*, *15* (4), 346–359. https://doi.org/10.2304/ciec.2014.15.4.346

Cerniglia, L., Cimino, S., Erriu, M., Jezek, S., Almenara, C. A., & Tambelli, R. (2018). Trajectories of aggressive and depressive symptoms in male and female overweight children: Do they share a common path or do they follow different routes? *PLoS ONE, 13*(1), e0190731. https://doi.org/ 10.1371/ journal.pone.0190731

Council of the European Union. (2019). Council recommendation of 22 May 2019 on high quality early childhood education and care systems (2019/C 189/02). *Official Journal of the European Union.*

Dahlberg, G., Moss, P., & Pence, A. R. (1999). *Beyond quality in early childhood education and care: Postmodern perspectives.* Psychology Press.

Dalli, C., White, E. J., Rockel, J., Duhn, I., Buchanan, E., Davidson, S., Ganly, S., Kus, L., & Wang, B. (2011). *Quality early childhood education for under-two-year-olds: What should it look like?* Ministry of Education.

Das, M., Elsey, H., Shawon, R. A., Hicks, R. A., Ferdoush, J., Huque, R., Fieroze, F., Nasreen, Sh., Wallance, H., & Mashreky, S. (2018). Protocol to develop sustainable day care for children aged 1–4 years in disadvantaged urban communities in Dhaka, Bangladesh. *British Medical Journal Open*, *8*, e024101. https://doi.org/10.1136/ bmjopen-2018-024101

Dobrotić, I., Matković, T., & Menger, V. (2018). *Analiza pristupačnosti, kvalitete, kapaciteta i financiranja sustava ranoga i predškolskog odgoja i obrazovanja u Republici Hrvatskoj.* [Analysis of accessibility, quality, capacity and financing of the system of early and preschool education in the Republic of Croatia]. Ministry of Demographics, Family, Youth and Social Policy of the Republic of Croatia.

Dunn, L. (1993). Proximal and distal features of day care quality and children's development, *Early Childhood Research Quarterly, 8*(2), 167–192.

European Commission Working Group. (2014). Proposal for key principles of a quality framework

for early childhood education and care. *Report of the working group on early childhood education and care under the auspices of the European Commission.*

Farkas, A. (2014). *Conceptualizing inclusive education and contextualizing it within the UNICEF mission*. United Nations Children's Fund – UNICEF.

Ferreira, T., Cadima, J., Matias, M., Vieira, J. M., Leal, T., Verschueren, K., & Matos, P. M. (2018). Trajectories of parental engagement in early childhood among dual-earner families: Effects on child self-control, *Developmental Psychology, 54*(4), 731–743. http://dx.doi.org/10.1037/dev0000458.

Frazer, H., & Marlier, E. (2014). *Investing in children: Breaking the cycle of disadvantage - A study of national policies assessment of what member states would need to do to implement the European Commission Recommendation, Synthesis Report*. Publications Office of the European Union.

Geddes, R., Frank, J., & Haw, S. (2011). A rapid review of key strategies to improve the cognitive and social development of children in Scotland, *Health Policy, 101*(1), 20–28. https://doi.org/ 10.1016/j. healthpol.2010.08.013.

Hamre, B., Hatfield, B., Pianta, R., & Jamil, F. (2014). Evidence for general and domain-specific elements of teacher-child interactions: Associations with preschool children's development, *Child development, 85*(3), 1257–1274.

Hayes, N., & McGrath, D. (2004). *Making connections: A review of international policies, practices and research relating to quality in early childhood care and education*. The Centre for Early Childhood Development and Education.

International Step by Step Association. (2010). *Competent educators of the 21st century: ISSA's principles of quality pedagogy.* International Step by Step Association.

Jager, J. (2016). The inclusion of disadvantaged children in preschool programs: The children's rights and social responsibility. *Zbornik Instituta za pedagoška istraživanja, 48*(1), 147–163.

Lazar, I. (1977). *The persistence of preschool effects. A national collaborative study. Analysis and final report.* Cornell University.

Lowe Vandell, D., Belsky, J., Burchinal, M., Steinberg, L., & Vandergrift, N., NICHD early child care research network (2010). Do effects of early child care extend to age 15 years? Results from the NICHD Study of Early Child Care and Youth Development. *Child Development*, *81*(3), 737–756.

Kievik, M., E. Giebels, E., & Gutteling, J. M. (2020). The key to risk communication success. The longitudinal effect of risk message repetition on actual self-protective behaviour of primary school children. *Journal of Risk Research, 23*(12), 1525–1540.

McQuail, S., Mooney, A., Cameron, C., Candappa, M., Moss, P., & Petrie, P. (2002). *Early years and childcare international evidence project: Child outcomes*. DfES.

Melhuish, E. C. (2004). *A literature review of the impact of early years provision on young children, with emphasis given to children from disadvantaged backgrounds*. National Audit Office.

Melhuish, E., Barnes, J., Gardiner, J., Siraj, I., Sammons, P., Sylva, K., & Taggart, B. (2019). A study of the long-term influence of early childhood education and care on the risk for developing special educational needs. *Exceptionality Education International*, *29*(3), 22–41.

Moss, P. (1994). Defining quality: Values, stakeholders and processes. In P. Moss & A. Pence (Eds.),

Valuing quality in early childhood services: New approaches to defining quality (pp. 1–10). Paul Chapman Publishing.

Moss, P., & Pence, A. (1994). Towards an inclusionary approach in defining quality. In P. Moss & A. Pence (Eds.), *Valuing quality in early childhood services: New approaches to defining quality* (pp. 172–178). Paul Chapman Publishing.

Moss, P., Petrie, P., Cameron, C., Candappa, M., McQuail, S., & Mooney, A. (2003). *Early years and childcare international evidence project: An introduction to the project*. DfES.

Nasiopoulou, P., Williams, P., & Lantz-Andersson, A. (2021). Preschool teachers' work with curriculum content areas in relation to their professional competence and group size in preschool: A mixed-methods analysis. *Scandinavian Journal of Educational Research,* 1–16. DOI: 10.1080/00313831.2021.189787

National Curriculum for Early Childhood and Preschool Education and Care. (2015). *Official Gazette of the Republic of Croatia, 5*/2015.

National Development Strategy of the Republic of Croatia until 2030. (2021). *Official Gazette, 13/2021.*

OECD. (2001). *Starting Strong: Early Childhood Education and Care. Education and Skills*. OECD Publications.

OECD. (2006). *Starting strong II: Early childhood education and care*. OECD Publications.

OECD. (2011). *Starting strong III: A quality toolbox for early childhood education and care*. OECD Publishing.

OECD. (2016). *Who uses childcare? Background brief on inequalities in the use of formal early childhood education and care (ECEC) among very young children*. OECD.

Pascal, C., Bertram, T., Delaney, S., & Nelson, C. (2012). *A comparison of international childcare systems: Evidence to childcare commission*. Department for Education.

Peeters, J., & Sharmahd, N. (2014). Professional development for ECEC practitioners with responsibilities for children at risk: Which competences and in-service training are needed? *European Early Childhood Education Research Journal, 22*(3), 412–424.

Peisner-Feinberg, E., Burchinal, M., Clifford, R., Culkin, M., Howes, C., Kagan, S., Yazejian, N., Byler, P., Rustici, J., & Zelazo, J. (1999). *The children of the cost, quality, and outcomes study go to school: Executive summary.* University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Centre.

Peleman, B., Lazzari, A., Budginaitė, I., Siarova, H., Hauari, H., Peeters, J., & Cameron, C. (2018). Continuous professional development and ECEC quality: Findings from a European systematic literature review. *European Journal of Education, 53*(1), 9–22.

Reiss, F. (2013). Socioeconomic inequalities and mental health problems in children and adolescents: A systematic review. *Social Science & Medicine, 90*, 24–31.

Sabates, R., & Dex, S. (2015). The impact of multiple risk factors on young children's cognitive and behavioural development. *Children & Society*, *29*(2), 95–108. https://doi.org/10.1111/chso.12024

Sammons, P. M., Toth, K., & Sylva, K. (2015). *Subject to background: What promotes better achievement by bright but disadvantaged students?* University of Oxford Department of Education.

Sandseter, E. B. H., & Seland, M. (2016). Children's experience of activities and participation and their subjective well-being in Norwegian early childhood education and care institutions, *Child Ind Res, 9*(4), 913–932. https://doi.org/10.1007/s12187-015-9349-8

Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. (2005). *Lifetime effects: The high/scope perry preschool study through age 40*. High/Scope Educational Research Foundation.

Schweinhart, L. J. (2003). Benefits, costs, and explanation of the High/Scope Perry Preschool Program. Paper presented at the *Meeting of the Society for Research in Child Development Tampa,* Florida.

Sheridan, S. (2001). Pedagogical quality in preschool: An issue of perspectives (Doctoral dissertation). University of Gothenburg. https://gupea.ub.gu.se/bitstream/2077/10307/1/gupea_2077_10307_1.pdf

Sheridan, S. (2007). Dimensions of pedagogical quality in preschool. *International Journal of Early Years Education, 15*(2), 197–217.

Shonkoff, J. P., & Philips, D. A. (Ed). (2000). *From neurons to neighbours: The science of early childhood development*. National Academy Press.

State Pedagogical Standard of Preschool Education. (2008). *Official Gazette, 55/06*, *121/07, 10/97, 105/02, 107/07, 63/08, 90/10*.

Sylva, K., Melhuish, E., Sammons, P., Siraj, I., & Taggart, B. (2004). *The Effective Provision of Pre-School Education (EPPE) Project: Findings from pre-school to end of key stage 1*. https://www.researchgate.net/publication/237527842_The_Effective_Provision_of_Pre- School_Education_EPPE_Project_Findings_from_Pre-school_to_end_of_Key_Stage1

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford I., Taggart, B., Hunt, S., Jelicic, H., Barreau, S., Grabbe, Y., Smees, R., & Welcomme, W. (2008). Effective preschool and primary education 3–11 Project. Eppe 3–11. Final report from the primary phase: Preschool, school and family influences on children's development during key stage 2 (Age 7–11) (Research Report No. DCSF-RR061). Department of Children, Schools & Families.

Tankersley, D., & Ionescu, M. (2016). The ISSA principles of quality pedagogy: Quality early childhood education and care through democratic processes. *Learning for Well-being Magazine, 1,* 1–8.

Tankersley, D., Brajković, S., Handžar, S., Rimkiene, R., Sabaliauskiene, R., Trikić, Z., & Vonta, T. (2012). *Theory in practice, a handbook for the professional development of primary school teachers*. Public Open University Step by Step.

The Education and Teacher Training Agency (ETTA). (n.d.). https://www.azoo.hr/

The Preschool Education Act. (1997). *Official Gazette, 10/97, 107/07, 94/13*.

UNICEF Office for Croatia. (2020). *Kako do vrtića za sve? Mogućnosti financiranja sustava ranog i predškolskog odgoja i obrazovanja.* [How do you get a kindergarten for everyone? Possibilities of financing the system of early and preschool education]. UNICEF Office for Croatia.

Van Dyke, M. K. (2017). *The economic realities of early childhood education in the United States*

and the policy implications for economically disadvantaged children, families, and the child care workforce in African American children in early childhood education. http://dx.doi.org/10.1108/S2051-231720170000005013

Wangmann, J. (1995). Towards integration and quality assurance in children's services, *AIFS early childhood study paper No. 5*. Australian Institute of Family Studies.

Woodhead, M. (1996). *In search of the rainbow: Pathways to quality in large-scale programmes for young disadvantaged children*. Bernard van Leer Foundation.

Biographical note

Sandra Antulić Majcen, PhD, is a Senior Expert Advisor at the Research and Development Department at the National Centre for External Evaluation of Education, Croatia. Her research interests include the evaluation of the pre-tertiary education system, specifically institutional self-evaluation with an emphasis on the process-oriented evaluation within early childhood education and care.

Maja Drvodelić, PhD, is an Assistant Professor at the Department of Pedagogy and Didactics at the Faculty of Teacher Education University of Zagreb, Croatia. Her areas of scientific interests include quality of preschool and primary school education, teacher education, educational evaluation with a particular focus on preschool and primary school self-evaluation process.

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A Model of Transformational Leadership in the Organisational Culture of Preschool Institution

Vesnica Mlinarević[1], Ružica Tokić Zec*[2] and Ana Cvjetičanin[3]

The culture of an organisation refers to the common and dominant values and norms, as well as the beliefs and perceptions of its employees. Organisational culture influences employee behaviour and attitudes. The culture of the institution predetermines the tone of the environment, which can affect employee satisfaction. The basic premise of this paper is established in the connection between the characteristics of the leader and the transformational model of leadership in the organisational culture of the preschool institution. This research aims to determine whether the assessments and self-assessments of leaders and preschool teachers differ in the frequency of using the transformational leadership style and to determine the relationship between the transformational leadership style and the leader's personality traits. The research was conducted in a private Croatian preschool institution, which consists of 10 kindergartens. A total of 51 participants in 9 kindergartens participated in the research. The study used a quantitative research approach. The research results show that preschool teachers and leaders do not differ significantly in estimates of the frequency of application of the transformational leadership style and that there is a significant correlation between some characteristics of the leader and the transformational model of preschool leadership.

Keywords: organisational culture, preschool institution, preschool teachers, transformational leadership

1 Faculty of Kinesiology and Faculty of Education, J. J. Strossmayer University of Osijek, Croatia.
2 *Corresponding Author. Faculty of Education, J. J. Strossmayer University of Osijek, Croatia; ruzica.tokic@gmail.com.
3 Didi Kindergarten Velika Gorica, Croatia.

Model transformacijskega vodenja v organizacijski kulturi predšolske ustanove

Vesnica Mlinarević, Ružica Tokić Zec in Ana Cvjetičanin

Kultura organizacije se nanaša na skupne in prevladujoče vrednote in norme ter prepričanja in zaznave zaposlenih. Organizacijska kultura vpliva na vedenje in odnos zaposlenih. Kultura ustanove vnaprej določa ton okolja, kar lahko vpliva na zadovoljstvo zaposlenih. Osnovno izhodišče prispevka temelji na povezavi med značilnostmi vodje in transformacijskim modelom vodenja v organizacijski kulturi predšolske ustanove. Namen raziskave je ugotoviti, ali se ocene in samoocene vodij in vzgojiteljev razlikujejo v pogostosti uporabe transformacijskega sloga vodenja, ter določiti povezavo med transformacijskim slogom vodenja in osebnostnimi značilnostmi vodje. Raziskava je bila izvedena v zasebni hrvaški predšolski ustanovi, ki obsega deset vrtcev. V njej je sodelovalo 51 udeležencev iz devetih vrtcev. V raziskavi je bil uporabljen kvantitativni raziskovalni pristop. Rezultati kažejo, da se vzgojitelji in vodje v vrtcih ne razlikujejo bistveno v ocenah pogostosti uporabe transformacijskega sloga vodenja ter da obstaja pomembna povezanost med nekaterimi značilnostmi vodje in transformacijskim modelom vodenja v vrtcih.

Ključne besede: organizacijska kultura, predšolska ustanova, vzgojitelji, transformacijsko vodenje

Introduction

'Organisational culture' is a term describing the dominant beliefs and values within an organisation. The more pronounced the organisation's culture, the less need there is for the development of formal regulations that serve to guide behaviour. Transformational leadership is one of the newest forms of leadership and is, therefore, the least researched in the context of preschool institutions. Hey (2006) states that interest in transformational leadership has been the result of two phenomena since the 1980s. The first phenomenon refers to important global economic changes, such as greater competition, high product flow and changing demographic structures that created an unstable environment, beginning in the 1970s. The second phenomenon refers to the fact that the theoretical basis of leadership is based on the research of behaviours, situations, and characteristics, but some atypical leadership qualities were not considered.

The primary goal of a transformational leader is to increase the perception of success in an organisation and motivate its members (Bass, 2008). Transformational leaders make employees willing to deal with the problems and difficulties they face and give them autonomy to increase efficiency and effectiveness (Bass et al., 2003). The collegial model of leadership in education is associated with participatory, transformational, and interpersonal leadership models. Transformational leadership is in line with the collegial model because it assumes that all employees share the same values and interests, and thus all stakeholders are involved in achieving educational goals. (Tokić Zec, 2021). The transformational leadership style of kindergarten leaders affects the organisational culture of kindergarten.

Organisational culture of educational institution

Stoll and Fink (1996) state that the culture is at the same time a product and a process. As a product, it represents the achievements of the people who preceded us; as a process, it is permanently revitalised and recreated as new members embrace old traditions and as they themselves become teachers. Bruner (2000) believes that culture is used to recognise one's abilities, shape the mind, construct one's worlds, and create self-concepts. The implementation of culture is a co-construction process that includes the collaborative construction of knowledge of all stakeholders, whose activities are intertwined, connected, and interdependent. Brust Nemet and Mlinarević (2016) state that culture is marked by attitudes, common ideas and habits, and the way of life of members of a certain community that are passed down through the generations.

Tokić Zec (2021, p. 131) defines organisational culture as the organisation of 'daily work of employees who are focused on a common goal set on a common vision, mission and values of the institution and are motivated to improve the educational process and institution'. Furthermore, it is determined by 'quality relations, collegiality, trust, teamwork, joint activities, clear rules and an atmosphere of security' (Tokić Zec, 2021, p. 131).

Sušanj (2005, p. 67) categorises the function of the organisational culture as follows:

1. The culture of the organisation has the role of setting boundaries, meaning that it marks the difference between organisations;
2. It gives a sense of identity to its members;
3. It supports the development of collective affiliation;
4. It enhances system stability by providing standards of conduct;
5. It serves as a mechanism for determining the meaning of the environment that affects an individual's attitudes and behaviours.

Visković (2018) defines the culture of an institution or organisation as a hypothetical construct of values, beliefs, and attitudes that influence the formation of norms as written and unwritten rules of conduct. Brust Nemet and Mlinarević (2016) point out that lifelong learning and education are part of the culture of the institution. The implementation of education and lifelong learning is possible when the educational system becomes ready to monitor changes and bring them into the overall work culture and when the bearers of the educational process become ready to learn and take responsibility for achieving the goals of the educational process. Organisational change 'must begin and end with a change in man, his behaviour, attitude, values and way of thinking' (Belak & Ušljebrka, 2014, p. 81).

Theory of transformational leadership

Transformational model theory is defined as a leader's approach that causes changes in individuals and social systems. Transformational leadership increases motivation, morale and characteristics of employees in different ways, creates positive changes in employees with the ultimate goal of developing employees into leaders. In addition, transformational leadership determines the quality of cooperation between teachers and leaders in creating a quality work environment so that the education and work in kindergarten can be carried out effectively and efficiently, which impacts the development of teacher performances (Hafsari, 2020).

Transformational leadership is closely associated with the 'learning organisation', which is a term referring to an organisation in which people are willing to develop their abilities to create the results they want, in which different forms of thinking are nurtured, in which people learn how to work as a team and in which assumptions are set freely (Senge, 2009). The same author points out, when talking about the learning organisation, that its core is based on five disciplines of learning: systems thinking, personal development, identification of mental models, building a shared vision and team learning. The learning organisation is based on two important assumptions: knowledge is an important and main source of any organisation and represents a significant advantage among competitors, knowledge as a key part of the organisation represents the total knowledge of all employees. The culture of the institution is an important component for the learning organisation (Seme Stojnović & Hitrec, 2014).

Slunjski (2018) states that transformational leadership occurs when two people communicate in such a way that both parties develop a level of ethics and motivation to help each other. If such a level of communication is to be achieved, it is necessary to move away from the authoritarian leadership style and attempt to build a learning organisation in order to strive for a transformational leadership style, which, according to Seme Stojnović and Hitrec (2014), is one of the best contemporary leadership styles with the active participation of all stakeholders. In order to connect the involvement and participation of all stakeholders, it is important to develop the spread of employee interests at the level of the entire organisation, encourage understanding and acceptance of the goals and mission of the organisation in which they work, and take into account the well-being of others (Seme Stojnović & Hitrec, 2014). Furthermore, if the organisation begins to influence the development of systems thinking, it will be possible to understand better the interrelationships in life and the perception of the whole rather than parts (Senge, 2009). Thus, it reaches a level at which we see ourselves and our world in a new way.

Personal development is the next element closely related to transformational leaders and transformational leadership. Senge (2009) points out that vision is different from purpose. He compares the purpose with the general movement; the vision is a specific destination, a picture of the desired future. A shared vision is very important in connecting people; it allows people to change according to the company. People have a sense of belonging and togetherness. It creates a common identity. A transformational leader is expected to encourage personal development because the main strategy is simple: be a role model. He or she is the one who enables co-workers to create vision without fear; research and commitment to the truth are the norm; opposing the status quo is

necessary, as is implementing the principles of personal development in everyday life (Senge, 2009). Consequently, employees' professional development will be truly valued and will provide on-the-job training, which is also important for personal development. The transformational leader connects employees (and him/herself) with a sense of identity toward the institution's mission, vision, and shared identity. He or she is a role model for employees, inspires them, challenges them to take on greater challenges, and aligns tasks with their capabilities by understanding and knowing employees.

Bass et al. (2003, p. 208) list four dimensions of transformational leadership:

1. Idealised influence: It refers to the social charisma of the leader and whether he or she feels confident and committed to ideals.
2. Inspirational motivation: The leader conveys optimism with his visions that are attractive and inspiring to employees. Employees have a strong sense of purpose and are motivated to act. Employees are optimistic, encouraged, believe in the future and their abilities, and put more effort into their tasks.
3. Individualised consideration: The leader sets challenges for employees, gives them support and empathy and maintains communication. As a result, employees need self-development and intrinsic motivation for their tasks.
4. Intellectual stimulation: Leaders encourage creativity in employees and take risks, looking for ideas and assumptions of employees. They encourage independent thinking.

Transformational leadership facilitates redefining mission and vision, restructuring systems and commitments to achieve a goal. It is a relationship of mutual stimulation and sublimity that turns followers into leaders and can turn leaders into moral verticals. It must have a starting point in moral foundations. Hasanah (2020) interviewed a kindergarten principal to determine how she implements a transformational leadership style in her daily work through the four dimensions of transformational leadership. The results reveal that the principal uses all dimensions of transformational leadership and that this approach can create a change and improve the quality of kindergarten. Suharyati et al. (2016) surveyed 144 preschool teachers; their study aimed to determine whether the organisational culture of kindergarten, transformational leadership, and motivation are related to the innovation of educators. The quantitative and qualitative research results show a positive correlation of three factors (organisational culture, transformational leadership and motivation) with the innovation of educators (Tokić Zec, 2021, p. 64).

Characteristics of a transformational leader

Hafsari (2020, p. 489) defines leadership as 'the process of influencing others to take steps or actions towards a common goal'. The role of leadership exercised by the principles of educational institutions is a direct link with the institution's culture, because it carries with it the responsibility to shape and maintain norms and values and beliefs. As part of his professional experience, the principal him/herself has values and beliefs and can determine the tone and direction of the development of the institution's culture (Staničić, 2006). The same author emphasises several basic characteristics of a leader: communicativeness, innovation, creativity, vision, flexibility, encouraging change. Transformational leaders have integrity and high emotional intelligence, motivate people with a shared vision of the future, and communicate well. They inspire team members because they expect the best from everyone and consider themselves responsible for their actions. Transformational leaders set clear goals and have good problem-solving skills (Staničić, 2006).

Hey (2006) states four phases of organisational change under the transformational leader:

- To implement a change, it is necessary to make a convincing case;
- Encourage a shared vision;
- The change requires leadership;
- The change needs to be implemented in everyday work.

A transformational leader will achieve a shared vision by involving all employees in regularly shaping and reshaping strategic or other plans, seeking broad input and encouraging everyone to think about a new and better future. Inspiring a shared vision can also be achieved through conscious role modelling strategies and coaching. Change requires leadership, and special attention should be paid to the leader's emotional resistance that may arise in response to change, which can be discerned by carefully recognising the individual needs of followers. It is necessary to instil a sense of urgency and encourage cooperation and self-confidence of followers.

The current study

The research aimed to examine the connection between the personality traits of a leader and the transformational model of leading a preschool institution.

The research problems and hypotheses are the following:

1. To determine whether assessments and self-assessments of the frequency of using a transformational leadership style differ among leaders and preschool teachers.
   H1: Preschool teachers and leaders will not differ in estimates of the frequency of applying transformational leadership style in the work of leaders.
2. Establish a connection between the transformational leadership style and the personality traits of the leader.
   H2: There is a connection between some personality traits of a leader and a transformational model of running a preschool. The assumption is that leaders who more often apply a transformational leadership style will be more extraverted, more agreeable, and have higher scores on the intellect scale.

Method

Participants

The total number of participants was 51 from the preschool institution DIDI, a private preschool institution with 60 employees; 80% of the employees participated in this research. There were two categories of participants. The first was kindergarten leaders who assessed their own leadership styles and personality traits. The second was preschool teachers who assessed the leaders' leadership style and personality traits in their kindergarten. Leaders used a multi-factor leadership questionnaire (a 'leader form') to assess leadership style, and preschool teachers used a multi-factor leadership questionnaire (an 'evaluator form') to assess leadership style.

Table 1 shows the socio-demographic characteristics of kindergarten leaders. A total of nine leaders participated in the research; eight were female and one male. The majority of leaders are aged 36 to 45 (44%); significantly, most leaders are aged 26 to 45 (7 of 9 leaders). All involved leaders have a bachelor's degree (4) or a master's degree (5). Most leaders (7) have up to five years of work experience, and two have between 11 and 15 years of experience.

Table 1
Socio-demographic characteristics of leaders

		N	%
Gender	Male	1	11
	Female	8	89
Age	18 to 25 years	1	11
	26 to 35 years	3	33
	36 to 45 years	4	44
	46 and older	1	11
Education	Bachelor's degree	4	44
	Master's degree	5	56
Years of experience	0 to 5 years	7	78
	11 to 15 years	2	22

Table 2 shows the socio-demographic characteristics of the preschool teachers' sample. The data show that a total of 42 female preschool teachers participated in the research. Almost half of them (48%) belong to the age group between 18 and 25, have a secondary school diploma (62%) and have five or fewer years of work experience as a preschool teacher. The remaining age groups are 26 to 35 years of age (40%), 36 to 45 years of age (10%) and 46 to 55 years of age (2%). A total of 21% of preschool teachers involved in the research have a bachelor's degree, and 17% have a master's degree. Only 9% of preschool teachers have six or more years of work experience.

Table 2
Socio-demographic characteristics of preschool teachers

		N	%
Gender	Female	42	100
Age	18 to 25 years	20	48
	26 to 35 years	17	40
	36 to 45 years	4	10
	46 to 55 years	1	2
Education	Secondary school	26	62
	Bachelor' degree	9	21
	Master's degree	7	17
Years of experience	0 to 5 years	38	90
	6 to 10 years	3	7
	11 to 15 years	1	2

In order to investigate whether kindergartens differ significantly according to socio-demographic characteristics, chi-square tests were calculated for each of them, and the results showed that there is no statistically significant difference between the individual nine kindergartens according to any of the included characteristics. In other words, the samples are homogeneous according to gender, age, education, and work experience of the preschool teachers involved.

Instruments

Several questionnaires were used in the research. They contained instructions for completing and a brief explanation of the purpose of the research. Socio-demographic data were examined through basic questions on gender, age, level of education and work experience. The International Personality Item Pool (IPIP) was used to examine personality traits, and the transformational leadership model was measured using the Multifactor Leadership Questionnaire, Croatian edition (MLQ, Naklada Slap, 2010, according to Avolio & Bass).

The IPIP consists of 50 items. This questionnaire examines personality traits according to Goldberg's personality model (1993). Extraversion, agreeableness, emotional stability, conscientiousness and intellect are the five personality traits for which ten items are defined in the questionnaire. Extraversion refers to the tendency to be outgoing, assertive, active, and excitement seeking. Agreeableness is a tendency to be kind, gentle, trusting, and warm. Emotional stability is the opposite of neuroticism, which is the tendency to be anxious, fearful, and moody. Conscientiousness is defined by achievement and dependability. Finally, intellect is the tendency to be creative, imaginative, and perceptive (Judge & Bono, 2000). Participants responded to what extent a particular statement refers to a person they assess by selecting on a multiple Likert-type scale in which 1 means 'completely incorrect', 2 means 'mostly incorrect', 3 means 'neither true nor false', 4 means 'mostly correct' and 5 means 'correct'.

The MLQ consisted of 45 items, nine of which related to management outcomes (satisfaction with the leader, additional effort and effective leaders), and 36 items related to leadership. Thirty-six items describe three leadership styles: transformational style (Idealised Influence-Attributed, Idealised Influence-Behaviour, Inspirational Motivation, Intellectual Stimulation, Individualised Care), Passive-Avoidant Leadership Style (Passive Leadership by Laissez Faire), and transactional leadership style (Active Exception Leadership and Conditional Rewarding) and make up the nine scales.

Data collection procedure

The research was conducted in October 2020 in the preschool institution DIDI, which consists of 10 kindergartens; the research was conducted in nine kindergartens. Preschool teachers and leaders were introduced to the aim of the research and voluntarily completed the questionnaires. All ethical norms of research were met.

Results and discussion

Descriptive statistics of the scales used

Descriptive values of the scales were calculated. There are nine leadership style scales, of which five explore individual aspects of the transformational style, and the remaining four measure the degree to which leaders use other styles. In addition to each scale individually, the total score obtained as the average score from all five transformation scales together is also shown. This result indicates the overall level of transformational leadership style, used in later analyses. The remaining five scales (extraversion, agreeableness, conscientiousness, emotional stability and intellect) are subscales of the IPIP questionnaire and measure individual personality dimensions. Descriptive statistics (i.e. minimum, maximum, arithmetic mean, standard deviation, asymmetry and flatness) are presented separately for leaders' self-assessment (Table 3) and preschool teachers' assessment (Table 4).

Table 3

Descriptive data of used scales for leaders

	Minimum	Maximum	M	SD	Asymmetry	Flatness
TRANSFORMATIONAL LEADERSHIP SCALE						
Idealised Influence (attributions)	1.5	3.0	2.4	.54	-.476	-.765
Idealised Influence (behaviour)	2.3	3.8	3.3	.50	-1.085	.585
Inspirational Motivation	2.3	4.0	3.4	.49	-1.683	4.270
Intellectual Stimulation	2.8	4.0	3.4	.47	.038	-1.098
Individualized Care	3.5	4.0	3.8	.20	-.216	-1.041
Transformational style total	**2.7**	**3.6**	**3.2**	**.32**	**-.710**	**-.704**
OTHER LEADERSHIP STYLES SCALES						
Conditional Rewarding	1.5	3.8	3.1	.67	-1.984	4.479
Active Exception Leadership	3.0	4.0	3.4	.31	.816	.349
Passive-Avoidant Leadership	0.0	1.8	1.0	.63	-.261	-1.237
Laissez-faire	0.0	0.5	0.2	.17	.254	-.040

	Minimum	Maximum	M	SD	Asymmetry	Flatness
PERSONALITY TRAITS						
Extraversion	3.2	4.5	3.7	.46	.658	-.772
Agreeableness	4.1	5.0	4.6	.38	.016	-2.066
Conscientiousness	4.3	4.9	4.6	.23	.495	-1.591
Emotional stability	3.5	4.9	4.0	.44	1.161	.935
Intellect	2.9	3.9	3.4	.29	.268	.525

Note. $N = 9$.

The results in Table 3 show that the minimum total self-assessment score on the transformational leadership style is 2.7, and the maximum is 3.6. The arithmetic mean is $M = 3.2$, and the standard deviation, $SD = .32$. Since the scale ranges from 0 to 4, such results indicate a tendency of results toward the upper part of the curve, meaning that participants are more prone to higher scores on a transformational leadership style. Asymmetry and flatness show how much the distributions of the results deviate from the normal distribution. It is generally considered that values from -1 to 1 on asymmetry and from -2 to 2 on flatness indicate distributions of results within normal limits. However, in this case, it should be taken into account that this is a small sample of results ($N = 9$) which can significantly affect these values. Therefore, it is not uncommon for several scales to have asymmetry and flatness, indicating significant deviations from the normal distribution. However, when the five transformational leadership scales are merged into a common result, it is seen that the asymmetry and flatness indicate the results corresponding to the normal distribution. Furthermore, scales that measure other leadership styles are not relevant in this paper.

Table 4 shows the same descriptive indicators but on the results of preschool teachers. It is important to emphasise that descriptive statistics are not presented individually for all 42 preschool teachers, but the average is calculated for each assessed leader. In other words, if, for example, five preschool teachers assessed the same leader, the average of their results for that leader was calculated. In this way, each leader received an unambiguous assessment from their subordinates for each trait examined. This assessment was later used in further analyses in the paper. Given that several preschool teachers evaluated the same leader, the presentation of results on the entire sample of 42 educators would not indicate the actual results but the personal equations of preschool teachers (tendency to choose higher or lower values on a scale), or variance among results for the same leader would indicate a difference between preschool teachers rather than actual differences among leaders. Because such data are of little importance for this research, whose primary goal is to determine

the relationship between leadership style and personality traits, all further results were presented on the leaders' self-assessments and on the sample (i.e., unified assessments of the preschool teachers group for each leader).

Table 4

Descriptive data of scales used for preschool teachers after calculated averages for each leader

	Minimum	Maximum	M	SD	Asymmetry	Flatness
TRANSFORMATIONAL LEADERSHIP SCALE						
Idealised Influence (attributions)	2.3	3.6	3.1	.40	-.758	.921
Idealised Influence (behaviour)	2.7	3.4	3.0	.28	-.045	-2.070
Inspirational Motivation	2.8	4.0	3.3	.37	.168	-.471
Intellectual Stimulation	3.2	3.7	3.4	.20	-.172	-1.606
Individualised Care	3.3	3.9	3.6	.24	-.045	-1.425
Transformational style total	**2.9**	**3.6**	**3.3**	**.27**	**-.267**	**-1.047**
OTHER LEADERSHIP STYLES SCALES						
Conditional Rewarding	2.8	3.5	3.1	.29	.112	-1.407
Active Exception Leadership	2.9	3.8	3.4	.25	-.463	.518
Passive-Avoidant Leadership	0.5	1.8	1.1	.48	.171	-1.924
Laissez-faire	0.2	1.6	0.6	.46	1.855	3.153
PERSONALITY TRAITS						
Extraversion	3.8	4.6	4.3	.27	-.236	-1.159
Agreeableness	4.0	4.6	4.4	.21	-.278	-.098
Conscientiousness	3.8	4.9	4.5	.33	-1.686	3.432
Emotional stability	3.7	4.6	4.1	.34	-.249	-1.440
Intellect	3.0	3.7	3.4	.22	-.242	-.144

Note. $N = 9$.

The results (Table 4) show that the average result for all leaders on overall transformational leadership style is $M = 3.3$ ($SD = 0.27$), which is slightly higher than the self-assessments of leaders, for whom the average was 3.2 (Table 3). The minimum is 2.9, and the maximum is 3.6, which shows a tendency towards higher results on the scale. In other words, preschool teachers also evaluate that leaders use transformational leadership style. Other research results (Lesomo, 2013; Hasanah, 2020) also showed that the prevailing leadership style in educational institutions was the transformational style. Regarding the asymmetry and flatness of the results, it can be seen that a lesser number of variables differs from a normal distribution. When it comes to the variable of the greatest

interest for this research, it is conscientiousness, while all other variables (overall transformational style, extraversion, agreeableness, emotional stability and intellect) show normal distribution. Transformational leadership style in kindergarten is important for both preschool teachers and leaders because they together make kindergarten a place of positive organisational culture and innovations (Suharyati et al., 2016).

Comparison of assessment and self-assessment of the leadership style

In further analysis, the assessment and self-assessment of the application of the leadership style of the kindergarten leaders are compared. In order to determine if there is a difference between the two, t-tests were calculated for each of nine kindergartens. Average assessments, self-assessments, and differences among them are presented in Table 5.

Table 5

Comparison of assessment and self-assessment in the application of transformational leadership model

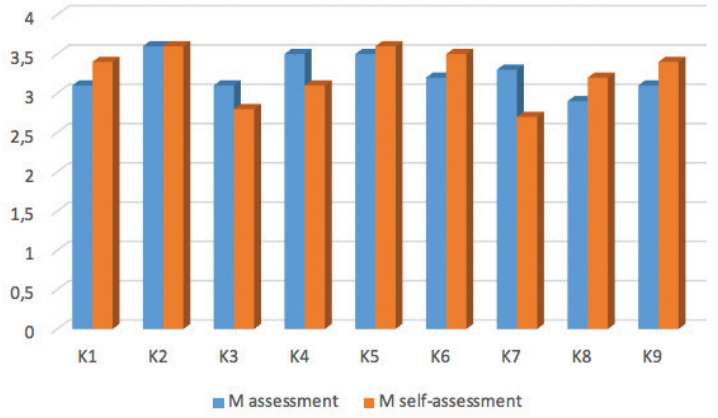
	N	M assessment	M self-assessment	t	df	p
K 1	4	3.1	3.4	-.49	3	.660
K 2	3	3.6	3.6	.36	2	.751
K 3	4	3.1	2.8	2.00	3	.139
K 4	2	3.5	3.1	3.50	1	.177
K 5	5	3.5	3.6	-.66	4	.543
K 6	8	3.2	3.5	-1.18	7	.276
K 7	**6**	**3.3**	**2.7**	**3.43**	**5**	**.019**
K 8	5	2.9	3.2	-1.30	4	.265
K 9	5	3.1	3.4	-2.25	4	.087

Note. K-kindergarten.

The results in Table 5 indicate that almost all kindergartens (8 out of 9) do not differ in how leaders themselves assess the extent to which they use a transformational leadership model with the assessments of their subordinates. In only one kindergarten (no. 7) is there a difference between the self-assessment of the leader and the average assessment of the preschool teacher ($t_{(5)} = 3.43$; $p < .05$). At the same time, the leader herself estimates that she uses the transformational model of leadership less than the preschool teachers estimate. The comparison of the above results is more clear in Figure 1.

Figure 1

Comparison of assessment and self-assessment of the frequency of using the transformational model of leadership (by kindergarten)



Transformational leaders are highly valued by their followers, so preschool teachers and leaders must have the same assessments of the leadership style. Having the same perception of the way kindergarten is led shows that leaders create a quality work environment; thus, the work in kindergarten can be carried out effectively and efficiently, which impacts the development of preschool teacher performance (Hafsari, 2020). Transformational leaders are seen as 'satisfying and inspirational, they are goal and vision setters, and because of this, their followers are inspired to do more and do better' (Morrison, 2018, p. 69). Transformational leaders can make a significant difference in an organisation's everyday life, which affects not only workers but also children and the quality of everyday interaction.

The relationship between the transformational model of leadership and the personality traits of the leader

To verify the second hypothesis of this study, Pearson's and Spearman's correlations between the tendency for transformational leadership style and the five personality traits (extraversion, agreeableness, conscientiousness, emotional stability, and intellect) were calculated. It has been shown that Pearson's and Spearman's method of calculating correlations gives the same general results (in terms of sign and significance of correlation, while the correlations themselves differ slightly), so only Pearson's correlations are shown. As in the previous chapters, the self-assessments of the leader and the average assessments of

the preschool teachers are presented separately. The relationship in preschool teachers' assessments is shown in Table 6.

Table 6

The relationship between transformational leadership and personality traits – assessment of preschool teachers

	1.	2.	3.	4.	5.	6.
1. Transformational style						
2. Extraversion	.922**					
3. Agreeableness	.360	.051				
4. Conscientiousness	.763*	.648	.165			
5. Emotional stability	.407	.399	.243	.624		
6. Intellect	.779*	.603	.604	.516	.198	

Note. $N = 9$. * $p < .05$; ** $p < .01$.

According to Table 6, there is a statistically significant and positive correlation between transformational leadership style and extraversion ($r = .922$, $p < .01$), transformational leadership style and conscientiousness ($r = .763$, $p < .05$) and transformational leadership style and intellect ($r = .779$, $p < .05$). The research results indicate that kindergarten leaders who are more prone to transformational leadership style are also more extraverted, have higher levels of conscientiousness and higher scores on the intellect scale. Leaders high in conscientiousness tend to be organised, responsible, persistent, and achievement-oriented, while being high in intellect includes having wide interests and being imaginative and insightful (Amponsah & Asamani, 2015). Extraverted leaders are talkative, energetic, and assertive. These personality traits are important when working in the kindergarten environment with preschool teachers, parents and children. Amponsah and Asamani (2015) conducted similar research on the sample of teachers, and the results showed that conscientiousness had the strongest relationship with transformational style. Leaders' self-assessments are shown in Table 7.

Table 7

The relationship between transformational leadership and personality traits – self-assessments of leaders

	1.	2.	3.	4.	5.	6.
1. Transformational style						
2. Extraversion	.148					
3. Agreeableness	.759*	.504				
4. Conscientiousness	-.505	-.113	-.389			
5. Emotional stability	-.512	.158	.010	.003		
6. Intellect	-.252	.049	-.248	.465	-.133	

Note. $N = 9$. * $p < .05$; **$p < .0$.

As with leadership outcomes, leadership assessments differ from preschool teachers' assessments. According to Table 7, the results of self-assessments of kindergarten leaders show that there is only a statistically significant correlation between transformational leadership and agreeableness ($r = .759$, $p < .05$). This correlation is positive, meaning that leaders who evaluate higher use of transformational leadership also have higher scores on self-assessment of agreeableness as a personality trait. This result is supported by the research of Judge and Bono (2000), whose results showed a positive correlation between agreeableness and transformational leadership. Leaders see themselves as approachable, cooperative, and able to get along with others (Amponsah & Asamani, 2015) so that others are free to communicate their ideas.

Due to the small samples on which the correlations were calculated, whether differences in leadership outcomes and personality traits exist was calculated as an additional analysis using the t-test. For this purpose, the results on the scale of transformational leadership are divided into two groups: low and high. The median value was used as a division criterion. Although such a procedure is not usually recommended on scale results, this procedure is applied here because the t-test, as a method, copes well with small samples for which there is an adequate correction. Due to earlier deviations of some scales from the normal distribution, the nonparametric Kruskal-Wallis test was also used as a control test. The results of the comparison on the assessments of preschool teachers are shown in Table 8.

Table 8

Differences in leadership outcomes and personality traits between leaders with low and high transformational leadership style - assessment of preschool teachers

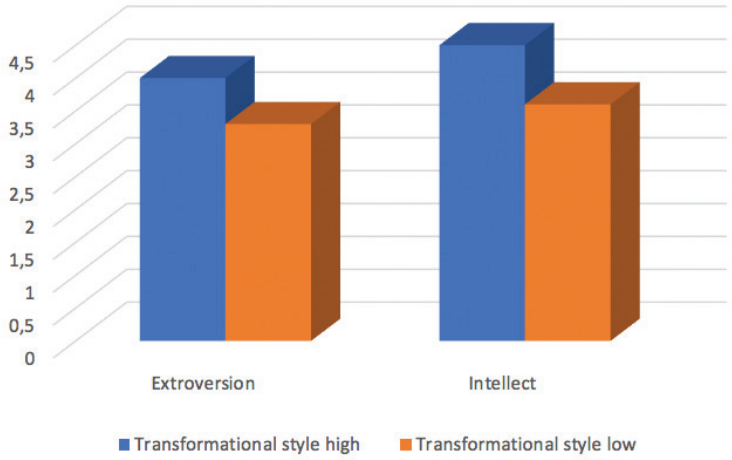
	t	df	p	p (Kruskal-Wallis)
Extraversion	-5.33	7	.001	.014
Agreeableness	-0.78	7	.460	.623
Conscientiousness	-1.68	7	.138	.138
Emotional stability	-1.04	7	.334	.461
Intellect	-2.54	7	.039	.049

Note. $N = 9$.

Table 8 shows that, according to preschool teachers, there is a statistically significant difference between leaders with low and high levels of transformational leadership style in extraversion ($t_{(7)} = 5.33$, $p < .05$) and intellect ($t_{(7)} = 2.54$, $p < .05$). The directions of these differences are shown in Figure 2.

Figure 2

Directions of differences in extraversion and intellect depending on low or high tendency for transformational leadership – preschool teachers' assessment



According to Figure 2, it can be seen that the results are higher on the two observed characteristics in leaders more prone to transformational leadership style. The transformational style is more often applied by leaders who are more extraverted and have higher scores on the intellect scale.

Table 9

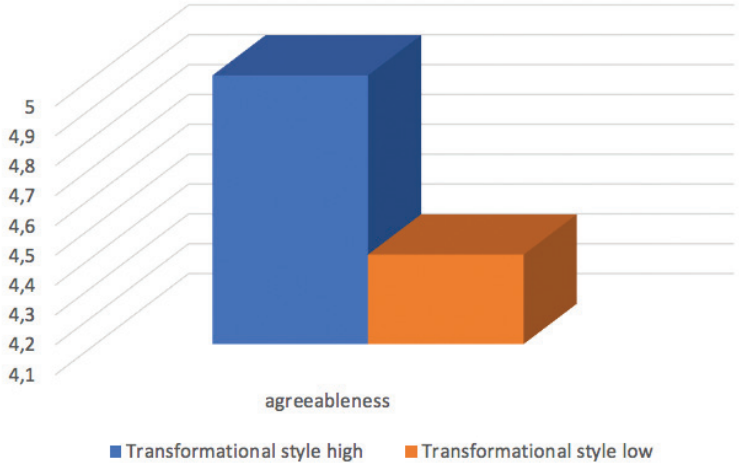
Differences in leadership outcomes and personality traits between leaders with low and high transformational leadership style - leaders' self-assessments (N=9)

	t	df	p	p (Kruskal-Wallis)
Extraversion	-1.02	7	.343	.262
Agreeableness	-3.38	7	.012	.024
Conscientiousness	0.38	7	.714	.548
Emotional stability	1.42	7	.198	.167
Intellect	-0.23	7	.826	.714

According to the results of the leaders (Table 9), between those with low and high scores on the scale of transformational leadership, there is a statistically significant difference in agreeableness ($t_{(7)} = 3.38$, $p < .05$). The direction of these differences is shown in Figure 3.

Figure 3

Directions of differences in agreeableness depending on low or high tendency for transformational leadership - leaders' self-assessment



According to Figure 3, leaders who are more inclined to a transformational leadership style have higher results in terms of agreeableness. In other words, according to self-assessments of kindergarten leaders, the transformational style is more often applied by leaders who are more friendly and kind.

The current research aimed to examine the connection between the personality traits of a leader and the transformational model of leading a preschool institution according to assessments of preschool teachers and self-assessments of kindergarten leaders.

The first hypothesis (*H1: Preschool teachers and leaders will not differ in estimates of the frequency of application of transformational leadership style in the work of leaders*) is partially confirmed. There is a difference in assessment only in one kindergarten, where the leader assesses a less frequent application of the transformation style than preschool teachers. Feijen (2017) conducted research that showed that behaving as a transformational leader affects team learning, innovation, and team performance positively. Therefore, transformational leadership is a suitable leadership style within early childhood settings. It produces better follower outcomes (e.g., higher motivation, higher competency, more self-respect) and organisational outcomes (e.g., higher teacher motivation, increased child outcomes, higher worker productivity). Thus, having a transformational leader is highly beneficial for early childhood settings (Babb & Gesler, 2021).

The second hypothesis (*H2: There is a connection between some personality traits of a leader and a transformational model of running a preschool*) is confirmed. Leaders who more frequently apply transformational leadership style will be more extraverted, agreeable, and have higher scores on the intellect scale. This result of personality traits is in line with the research of Judge and Bono (2000), who also proved that extraversion, agreeableness, and intellect positively predict transformational leadership. Patrick (2011) researched educational environments and concluded that intellect, agreeableness, and extraversion were identified to foster positive social relationships with subordinates. Simić and Runić Ristić (2017) showed a statistically significant positive relationship between the transformational leadership style and extraversion and intellect. Easley (2019) also proved a positive relationship between extraversion and a transformational leadership style. The link between transformational leadership and preschool improvement is seen to be via a collaborative organisational culture in which there is a common understanding of shared mission and vision (Lesomo, 2013).

Conclusion

The modern preschool institution is based on a series of assumptions. It must be a place of equal participation, quality of life, and joint learning of children and adults. All professionals can practice professional and responsible behaviour and are part of the curriculum of early and preschool education,

influencing and developing it. Freedom and respect for each individual are the fundamental values of the organisation of the preschool institution, development and leadership of both the preschool institution and each kindergarten in it. The acceptance and practice of continuous learning form the backbone of a modern preschool institution where all stakeholders share power and responsibility in the educational process and become co-responsible for its overall performance and quality level.

The primary influence on the culture of an organisation is exerted by the founder and leader. With his culture and personality traits, the leader can significantly contribute to the development of a quality institution for early and preschool education. A modern institution for early and preschool education presupposes a modern way of leading. The transformational model of leadership, one of the youngest models, is based precisely on the personality of the leader. Transformational leaders challenge assumptions and beliefs and encourage followers to be innovative and creative, approaching old problems in new ways. Transformational leaders empower followers by convincing them to propose new and controversial ideas without fear of ridicule. Kindergarten leaders who work with preschool teachers must create a positive, open and innovative organisational culture, part of which is the transformational style of leadership.

In this paper, two hypotheses were set. The first hypothesis that preschool teachers and leaders mostly do not differ in their estimates of how often leaders apply a transformational leadership style has been partially confirmed. The second hypothesis that there is a significant connection between some characteristics of the leader and the transformational model of running a preschool institution has been confirmed.

The importance of the results of this research is to point out the need for additional professional development and reflective approach of preschool principals and kindergarten leaders in the context of preschool leadership so that their cooperation with other stakeholders is focused on teamwork and collaborative culture, lifelong learning, and creating a common mission and vision. Transformational leadership leads to better relationships between people in an organisation, and it should be nourished in preschool institutions. The research results showed that leaders who more often apply the transformational leadership style will be more extraverted, more agreeable, and have higher scores on the intellect scale, which are important personality traits for kindergarten practice. The shortcoming of the presented research is a small number of participants, so the ability to generalise from the results is reduced. In order to obtain a broader picture of this issue, it would be good to include more preschool institutions, especially preschool leaders.

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References

Amponsah, M. O., & Asamani, L. (2015). Personality traits of teachers and desired leadership styles. *British Journal of Psychology Research, 3*(5), 1–15.

Babb, L., & Gesler, D. (2021). *Putting transformational leadership into practice*. https://www.childcareexchange.com/files/2021/03/5025856.pdf

Bass, B., M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88*(2), 207–218.

Bass, B., M. (2008). *The Bass handbook of leadership: Theory, research and managerial applications.* Free Press.

Belak, S., & Ušljebrka, I. (2014). Organizacijska kultura kao čimbenik uspješne provedbe organizacijske promjene [Organisational culture as a Factor in the Successful Implementation of Organizational Changes]. *Oeconomica Jadertina, 4*(2), 80–98.

Bruner, J. S. (2000). *Kultura obrazovanja* [The culture of education]. Educa.

Brust Nemet, M., & Mlinarević, V. (2016). Procjene učitelja o kulturi škole [Teachers' Assessments of the School Culture]. Život *i* škola*, 62*(1), 93–104.

Easley, S. (2019). *The relationship between leadership style and personality type among college students*. Dominican University.

Feijen, B. (2017). *The effect of network manager characteristics on team learning: The Big Five and transformational leadership*. Tilburg University.

Goldberg, L. R. (1992). The development of markers for the Big-five factor structure. *Psychological Assessment, 4*(1), 26–42.

Hafsari, A. S. (2020). The influence of the transformational leadership of kindergarten heads, job satisfaction, work spirit of work on the performance of kindergarten teachers in the Pelangi Cluster, South Banjarmasin District. *Journal of K6 Education and Management, 3*(4), 486–495.

Hasanah, M. S. (2020). The implementation of transformational leadership to improve school quality, advances in social science, education and humanities research. In A. Komariah, T. C. Kurniatun, D. A. Kurniady, R. Anggorowati, A. G. Abdullah, & A. B. D. Nandiyanto (Eds.), *4th International Conference on Research of Educational Administration and Management* (pp. 166–169). Atlantis Press.

Hey, I. (2006). Leadership of stability and leadership of volatility: Transactional and transformational leaderships compared. *The Online Journal, 4*(4), 1–13.

Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. *Journal of Applied Psychology, 85*(5), 751–765.

Lesomo, F. K. (2013*). Influence of school managers leadership styles on preschool teachers motivation: Case for Ndundori Division Nakuru County* (Master's thesis). University of Nairobi.

Morrison, C. (2018). *Transformational leadership and quality in head start programs* (Doctoral dissertation). Governors State University.

Patrick, C. L. (2011). Student evaluations of teachings: Effects of the Big Five personality traits, grades and the validity hypothesis. *Assessment and Evaluations in Higher Education, 36*(2), 239–249.

Seme Stojnović, I., & Hitrec, S. (2014). *Suvremeno vođenje u odgoju i obrazovanju* [Contemporary leadership in education]. Golden marketing-tehnička knjiga.

Senge, P. M. (2006). *The fifth discipline: The art and practice of learning organisation*. Doubleday.

Simić, J., & Runić Ristić, M. (2017). The relationship between personality traits and managers` leadership styles. *European Journal of Social Sciences Education and Research, 11*(2), 195–200.

Slunjski, E. (2018). *Izvan okvira 3. Vođenje: prema kulturi promjene* [Outside the box 3. Leadership: Towards the culture of change]. Element.

Staničić, S. (2006). *Menadžment u obrazovanju* [Management in education]. Vlastita naklada.

Stoll, L., & Fink, D. (1996). *Changing our schools: Linking school effectiveness and school improvement*. Open University Press.

Suharyati, H., Abdullah, T., & Rubini, B. (2016). relationship between organisational culture, transformational leadership, working motivation to teacher's innovativeness. *International Journal of Managerial Studies and Research, 4*(3), 29–34.

Sušanj, Z. (2005). *Organizacijska klima i kultura: konceptualizacija i empirijsko istraživanje* [Organizational climate and culture: conceptualization and empirical research]. Naklada Slap.

Tokić Zec, R. (2021). *Procjene odgojitelja, učitelja i sveučilišnih nastavnika o organizacijskoj kulturi odgojno-obrazovne ustanove* [Preschool teachers, primary school teachers and university instructors' perceptions on organizational culture in educational institutions] (Doctoral dissertation). Sveučilište J. J. Strossmayera u Osijeku, Filozofski fakultet.

Visković, I. (2018). Kultura zajednica u kojoj odrasta dijete rane i predškolske dobi [Culture of the communities in which children are growing up]. In A. Višnjić Jevtić & I. Visković (Eds.), *Izazovi suradnje: Razvoj profesionalnih kompetencija odgojitelja za suradnju i partnerstvo s roditeljima*. (pp. 15–65). Alfa.

Biographical note

Vesnica Mlinarević, PhD, is the dean of the Faculty of Kinesiology and a full professor at the Faculty of Education, J. J. Strossmayer University of Osijek, Croatia. Her research interests include early and preschool education, free time of children and youth, student behavior disorders, extracurricular activities, teacher competencies, the quality of university teaching, school culture and hidden curriculum, and the management of an educational institutions.

Ružica Tokić Zec, PhD, is a postdoctoral researcher in the field of pedagogy at the Faculty of Education, J. J. Strossmayer University of Osijek, Croatia. Her research interests include the culture of educational institutions, educational management, values of preschool teachers, teachers and university professors, family pedagogy and parenting.

Ana Cvjetičanin, mag. praesc. educ., works at Didi Kindergarten in Velika Gorica, Croatia. Her interests include new ways of preschool institution leadership, equal position of the educator in relation to the environment in which the educator works and children with special needs.

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Organisational Culture in Public University: A Case Study in Kosovo

Iliriana Tahiraj*[1] and Janez Krek[2]

In recent decades, there has been a significant increase in research that focuses on organisational culture as an important construct that can support or hinder the implementation of changes in higher education. In developing countries of Europe, limited studies are assessing organisational culture and its alignment with planned changes in higher education institutions. Hence, the objective of this research was to identify the dominant organisational culture types in higher education and understand how the planned changes are aligned with the dominant cultures. The research was conducted in a large public university in Kosovo. The Competing Values Framework was used to assess the organisational culture. The study adopted a quantitative research approach. The sample consisted of 102 academic staff from a population of approximately 960. The data were collected using a standardised instrument (The Organisational Culture Assessment Instrument (OCAI)) to identify the dominant organisational culture based on four organisational culture types: clan, hierarchy, adhocracy, and market. The data related to the planned changes of the university were collected through document analysis. The research identified hierarchy and market cultures as the dominant cultures. The results also show that the dominant organisational cultures militate against the main planned changes. The findings confirm the relevance of the Competing Values Framework in assessing the organisational culture in higher education institutions and provide direction to academic leaders about how they can align their planned changes with the organisational culture to achieve better outcomes.

Keywords: academic leaders, competing values framework, decision making, organisational culture, planned changes

1 *Corresponding Author. Faculty of Education, University of Prishtina, Kosovo; ilirianatahiraj14@gmail.com.

2 Faculty of Education, University of Ljubljana, Slovenia.

Organizacijska kultura na javni univerzi: študija primera na Kosovu

Iliriana Tahiraj in Janez Krek

V zadnjih desetletjih se je precej povečalo število raziskav, ki se osredinjajo na organizacijsko kulturo kot pomemben konstrukt, ki lahko podpira ali ovira izvajanje sprememb v visokem šolstvu. V razvijajočih se državah v Evropi je le malo študij, ki ocenjujejo organizacijsko kulturo in njeno usklajenost z načrtovanimi spremembami v visokošolskih ustanovah. Zato je bil cilj te raziskave opredeliti prevladujoče tipe organizacijskih kultur v visokem šolstvu in razumeti, kako so načrtovane spremembe usklajene s prevladujočimi kulturami. Raziskava je bila izvedena na veliki javni univerzi na Kosovu. Za oceno organizacijske kulture smo uporabili okvir konkurenčnih vrednot (Competing Values Framework). V študiji je bil uporabljen kvantitativni raziskovalni pristop. Vzorec sestavljata 102 visokošolska uslužbenca iz populacije približno 960 oseb. Podatki so bili zbrani s standardiziranim instrumentom (The Organisational Culture Assessment Instrument (OCAI)) za ugotavljanje prevladujoče organizacijske kulture na podlagi štirih tipov organizacijske kulture: klana, hierarhije, adhokracije in trga. Podatke, povezane z načrtovanimi spremembami univerze, smo zbrali z analizo dokumentov. V raziskavi smo ugotovili, da prevladujeta hierarhična in tržna kultura. Ti rezultati pokažejo, da prevladujoči organizacijski kulturi nasprotujeta glavnim načrtovanim spremembam. Ugotovitve raziskave potrjujejo pomembnost okvira konkurenčnih vrednot pri ocenjevanju organizacijske kulture v visokošolskih ustanovah in visokošolskim voditeljem dajejo usmeritve, kako bi lahko načrtovane spremembe uskladili z organizacijsko kulturo, da bi dosegli boljše rezultate.

Ključne besede: visokošolski voditelji, okvir konkurenčnih vrednot, odločanje, organizacijska kultura, načrtovane spremembe

Introduction

Introduction

Over the last decades, the redefinition of the relationship between the state and the market has had a significant impact on education, especially higher education, which is undergoing a process of deep institutional change (Apple, 2016; Cowden & Singh, 2013; Fredman & Doughney, 2012; Henkel, 2007; Vaira, 2004; Zgaga, 2012). Some of these changes include moving from 'elite' to 'mass' education by increasing the number of students, utilising diversity in both academic staff and students, developing new programmes, increasing accountability to regulatory bodies, internationalisation and competing with private higher education institutions (Baer et al., 2015; Becker & Trowler, 2001; Berács, 2014; Coates & Goedegebuure, 2012; Turk & Ledić, 2017). Several authors recognise that the specifics and structure of higher education institutions represent a unique challenge for leaders in the process of implementing changes (Kezar, 2009, Rowley & Sherman, 2003; Shugart, 2013; Stephens et al., 2015). Moreover, universities are considered conservative by nature and resistant to change, sometimes even being compared to churches (Anderson & Wenderoth, 2007; Louvel, 2013; Weiler, 2005).

Given the content of changes, which involves deep or transformational changes, the organisational structure, and history of universities, it is essential for academic leaders to understand the organisational culture in order to be able to identify relevant approaches when initiating, shaping and implementing changes in higher education (Kezar, 2014). Many authors have recognised that organisational culture is one of the basic constructs to improve the performance of higher education institutions. It acts as a conduit for academic leaders to implement their strategies and changes, as well as transforming universities into more adaptive and flexible organisations (Becker & Trowler, 2001; Brennan & Shah, 2000; Cameron & Quinn, 2011; Smart & John, 1996; Tierney, 1988; Trowler, 2008).

As a new concept in the management and leadership of institutions, organisational culture remains a complex notion, and there are differences regarding both its definition as well as the elements and dimensions of culture (Alvesson, 2002). Alvesson argues that the most common differences related to the definition are those between culture as a metaphor (organisation is culture), an approach founded in cultural anthropology, and culture as an attribute of the organisation (the organisation has culture), an approach that derives from a sociological foundation. Within each of these disciplines (anthropological and

sociological foundation), two different approaches to culture have been developed: a functional approach, which assumes that culture emerges from collective behaviour, and a semiotic approach, which assumes that culture resides in individual interpretation and cognitions (Cameron & Quinn, 2011). In addition, there are three different perspectives of studying organisational culture: the integration, differentiation, and fragmentation perspectives (Martin, 1992), recently used by Smerek (2010) and Cameron and Quinn (2011). The *integration perspective* assumes that culture is what people share or what holds them together and that there is a consensus about what culture exists in a particular organisation. The *differentiation perspective* assumes that culture is manifested by differences between subunits, and there is no consensus about what common culture exists. The third perspective, the *fragmentation perspective*, assumes that culture is ambiguous and unknowable and that individuals shift cultures frequently within an organisation so that no one culture can be identified.

Several authors have studied culture through the integration perspective. Schein is one of the most influential authors who have promoted the integration perspective for analysing and intervening in the culture of organisations. According to Schein (2004), the culture of a group is defined as:

> […] a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems […] (p. 17)

Schein (1985) considers *assumptions*, *values*, and *artefacts* to be the main elements of the organisational culture. He asserts that the norms become a visible manifestation of the joints assumptions but suggests that it should also be considered that behind the norms lie deeper assumptions that most members of a culture do not question. Further, he explains that 'most of the members of a culture are not even aware of their own culture until they encounter a different one' (Schein, 1999, p. 236).

Schein is considered one of the best-known theorists of cultural change, but his studies were focused on businesses and other institutions in general rather than in higher education specifically. One of the most influential authors of studying organisational culture in higher education is Tierney, who also provides a definition of the organisational culture that is grounded on the shared assumptions of individuals in an organisation. Tierney (1988) believes that 'an organization culture is reflected in what is done, how it is done and

who is involved in doing it' (p. 3). In this process, there is a strong link between leadership and organisational culture as leadership plays a key role in supporting an organisation to shape its culture and adapt it to its change strategies (Buller, 2014; Chaffee & Tierney, 1988; Kezar, 2009; Parish, 2011; Ramsden, 2002; Schein, 2004; Summak & Kalman, 2020).

Since culture is complex, it is still difficult for leaders to assess, understand, and use it as an integral part of their decision making. In an attempt to explain organisational culture, to show how each culture reacts differently to change and how change strategies should be aligned to culture, four or more cultural archetypes have been listed (Bergquist, 1992; Berquist & Pawlak, 2007). The Competing Values Framework (CVF), which represents a typological approach, is one of the models that was adapted to assess culture in the few research work about higher education (Beyketin et al., 2010; Ferreira & Hill, 2012; Omerzel et al., 2011; Smart et al., 1997). This model, initially developed by Quinn and Roherbaugh (1983) and later further amended by Cameron and Quinn, groups organisational culture into four types: clan, adhocracy, hierarchy, and market culture. The Competing Values Framework is based on the definition of culture represented by the functional, sociological tradition and considers culture as an attribute of an organisation that can be measured separately from other organisational phenomena. The framework has two core dimensions and two secondary dimensions. The core dimensions represent a continuum ranging from flexibility, discretion and dynamism, at one end, to stability, order and control, at the other. The other core dimension differentiates an orientation towards focusing on internal capability, interpretation, and unity of processes, on the one hand, from an orientation towards focusing on external opportunities and differentiation from the competition, on the other.

The two core dimensions form four quadrants, which have been named clan, adhocracy, market, and hierarchy. The two upper quadrants share an emphasis on flexibility and dynamism, while the lower quadrants focus on stability and control. *Hierarchy cultures* emerge because the environment is stable, and the activities in this quadrant create the most value when failure is not an option. The assumption is that respecting rules and regulations leads to stable, efficient, and highly consistent results. The aim of *market culture* is to create competitive advantage through better results, whereby the core values, competitiveness and results are achieved by emphasising external positioning and control. The assumptions are that the external environment is hostile, the organisation is there to increase its competitive position and clear purpose, and its strategy should lead to the results. The label *clan culture* refers to a family-type organisation consisting of shared values and goals, unity and a sense of

'we-ness', the main characteristics of which are teamwork, an employee involvement programme, and the organisation's commitment to its employees. The assumption is that an organisation can be best managed through teamwork and employee development: it empowers employees and facilitates their participation, commitment and loyalty. The major goal of *adhocracy culture* is to foster adaptability, flexibility and creativity, in order to respond to uncertainty, ambiguity and information overload, while there is no centralised power or authority. The assumptions of adhocracy culture are that innovative and pioneering initiative leads to success, and the main role of management is to foster entrepreneurship, creativity, and activity on the cutting edge.

The secondary dimensions of the Competing Value Framework include dynamics or approaches to change. It separates value-creation strategies on the basis of speed and scope of action by addressing two key questions: 'how quickly must we act to create value? and how much change must we initiate to create value?' (Cameron et al., 2006, p. 13). The first differentiates a focus on the change that is new, innovative, unique and transformational from a focus on small incremental change. It implies a difference between a focus on the new and a focus on the better. The second distinguishes between emphasising fast, short-term and immediate change and focusing on long-term, developmental, and sustained change.

Overall, the Competing Values Framework enables identifying the dominant organisational culture types in an organisation and understanding what kind of approaches to change these dominant types of culture facilitate.

Research problem

Kosovo emerged as a country after the war in 1999 and declared its independence in 2008. Since then, Kosovo has struggled with the process of implementing EU-related reforms aimed at European integration. In this journey, ensuring a qualitative higher education is one of the challenges. To improve its performance, Kosovo higher education has experienced significant changes in the previous two decades. New public universities as well private colleges and universities were introduced to the higher education system. Making inclusive education part of education policies has tripled the number of students in the largest public university. The number of study programmes has also increased, while the teacher-student ratio has deteriorated considerably, presumably influencing the decline of higher education quality. Various efforts have been made to change curricula, develop new programmes in line with labour market requirements, take advantage of new technology, and increase research and scientific work. However, only limited results have been achieved, the number

of graduates remains low, and there is a need to improve the quality of higher education (European Commission Report for Kosovo, 2019). After all these efforts, a question arises as to why it is taking so long and why it is so difficult for higher education institutions to implement the intended changes.

The intrusion of politics in higher education institutions is mentioned as the main reason for these limited results (European Commission Report for Kosovo, 2019; Gashi, 2014, ORCA, 2017, 2019; PISA, 2019; Pupovci, 2015). The presence of various factors that impact changes in higher education has been recognised by Tierney (1988), but he suggests that organisational culture shall also be considered. He argues that 'institutions certainly are influenced by powerful, external factors such as demographic, economic, and political conditions, yet they are also shaped by strong forces that emanate from within' (Tierney, 1988, p. 3). Moreover, most of the changes planned to be implemented in higher education in Kosovo are second-order changes, which means they are deep, transformational changes that alter the operating systems, underlying values, and culture of an organisation and system (Kezar, 2014). However, given that the organisational culture is implicit, several authors suggest that academic leaders tend to ignore it (Schein, 2006; Smart & John, 1996; Smerek, 2010). This leads to the problem of our research: whether the changes in higher education in Kosovo occur more on the structure and process level, leaving aside the organisational culture and the impact it can have on the implementation of the planned changes.

Therefore, the objective of this empirical research is to identify the dominant organisational culture types in higher education institutions and understand how the planned changes are aligned with the dominant cultures within a context of a developing country. A large public university, which is regarded as bearing the responsibility for setting the standard of education in Kosovo (hereafter referred to as the 'Studied Public University' (SPU)), is the subject of the present research. The main research questions that lead this research are: (1) what are the current and preferred dominant organisational cultures in the SPU? and (2) how are the planned changes aligned with the identified dominant organisational cultures?

Method

The study employed a quantitative research method using a survey questionnaire to collect the data to identify the dominant organisational cultures. In addition, document analysis enabled gathering data related to the changes that SPU incorporated in its strategic plan, vision, and mission.

Sample and participants

The SPU was selected as a sample as it is the oldest public university; it has the most students and, as such, is seen as bearing the responsibility for setting the standard of education in Kosovo. The SPU consists of 14 faculties, eight of which have been selected through a purposeful sampling based on the criteria that they represent a combination of law, arts, and social sciences faculties, as well as engineering, science and mathematics. The population of the SPU is 960 academic staff. Thus, the sample of 280 academic staff (or 29% of the total population) was randomly selected from eight SPU faculties: five faculties from law, arts and social sciences and three faculties from engineering, science and mathematics. The demographic variables of participants included faculty, age, gender, position, and working experience in university.

A total of 102 participants (36.4%) completed the questionnaire. Frequencies of the attributive variables in SPSS were calculated to describe how many participants were in the level of category, the percentage, and if there were any missing data. According to the data of the sample, 61 (61.0%) of the participants belonged to the social science faculties, and 39 (39.0%) came from natural sciences. There was an almost equal gender presentation of the academics in the sample, with 53 (52.0%) being male and 49 (48.0%) female. The largest number of 37 academics belonged to the age range between 36 and 45 years (36.3%), followed by 24 academics aged between 25 and 35 (23.5%), and 21 aged between 45 and 55 (20.6%). Those over 55 had the lowest representation in the sample with 8 (7.8%) academics.

Professors, associate professors, and assistant professors were grouped into the category of *professor*. The category of *assistants* included both junior and senior assistants. An almost equal presentation of these two categories was represented in this study, with 51 (50.0%) of the academics being professors and 49 (48.0%) assistants. Regarding working experience, 38 (37.3%) academics had been active in the university from 0 and 10 years, 33 (32.4%) academics between 11 and 20 years and 21 (20.6%) more than 20 years. The largest amount of missing data is also noted under the question related to the variable of *age* (12 incomplete or 11.8%) and *working experienc*e (10 incomplete or 9.8%), followed by *faculty* (2 missing or 2.0%) and *position* (2 missing or 2.0%).

Instrument

Although many instruments are used to assess organisational culture, the standardised Organizational Culture Assessment Instrument (OCAI) was selected because of its conceptual appropriateness. It was developed based on the Competing Values Framework and measures types of current and preferred

organisational culture (clan, adhocracy, market, and hierarchy), organisational culture congruence and approaches to change. OCAI has already been applied in studies in higher education; it is simple and easy to be used in practice. Another advantage of the OCAI questionnaire is that it consists of 24 statements, none of which is right or wrong. This is very appropriate for the contexts of developing countries, where the assessment of organisational culture and leadership issues in higher education can very easily be perceived as intentional or influenced, and it can lead to an unwillingness of academic leaders or academics to cooperate. The content of the OCAI questionnaire contributes significantly to limiting the effects of this possible interpretation. Permission from the authors to use the OCAI was first obtained. Then, an online version of the questionnaire was developed using Google Forms, and the participants answered it using an attitude scale (the Likert scale). The first part of the questionnaire also contained five additional questions about general demographic data.

Piloting the instrument – As there were no records that the OCAI questionnaire had previously been used in an Albanian version, the instrument was translated, crosschecked with several respondents, and then piloted in May 2018. Regarding the descriptive statistics to pilot the instrument, out of 30 returned questionnaires, the minimum mean was 2.53 while the maximum was 3.50. The standard deviation range was from 0.83 to 1.17, indicating that the scores were close together. The results confirmed that the instrument is reliable ($\alpha = .932$) and valid (variance explained by the first factor 41.9%).

Reliability and validity of the instrument – Following the piloting of the instrument in the Albanian language, the research was conducted during April and May 2019. Out of 280 questionnaires distributed to academics, 102 were returned. The overall reliability coefficient (Cronbach's α) was very good (.953). Cronbach's α was also calculated for each of the four scales separately: clan (.857), adhocracy (.849), market (.895) and hierarchy (.847). Regarding the validity, the results showed that the variance explained by the first factor was 51.8%, confirming the instrument is valid.

Research design

The quantitative data gathering through the OCAI instrument took place during April and May 2019. Prior to that, a written request was submitted to the Rectorate of the SPU to enable the distribution of the questionnaire through their office to academics in eight faculties. The Rectorate indicated that it would not be advisable to route the questionnaire through that office as academics could understand this as pressure from the Rectorate to complete it. Since academics are free to answer whatever questionnaire is addressed to them, it was suggested that

the researchers should approach the academics directly or coordinate the process through each faculty. A request was addressed to eight faculties for questionnaires to be distributed through their offices: three agreed to do this, other faculties suggested that the researchers distribute the questionnaire independently, as the list of the regular professors of their faculty was available on the faculty web page. The digital version of the OCAI questionnaire was distributed in April 2019 to the first three faculties who agreed to distribute the questionnaire through their office. The questionnaire was then distributed to the academics of other faculties, based on random sampling on the list of the regular professors published on the web page and using a snowball sampling.

It should be noted that there was no significant difference in the number of responses received from the faculties who distributed the questionnaire through their office or faculties where the researchers distributed the questionnaire directly. There was no obligatory/mandatory question included, and the deadline to complete the questionnaire was two weeks. The quantitative gathered data have been analysed using SPSS software. The mean and standard deviation were used to calculate descriptive data, while for analysing the inferential data, parametric tests were used: T-test and one-way ANOVA.

Given that a research question was also focused on analysing the types of changes as they were included in the vision, mission, and strategic objectives of the SPU, the following documents were selected to gather the data: 'Strategy and Action Plan of the SPU 2017-2019', 'Rectors' work program until September 2020', 'Statute of the SPU', 'Kosovo Education Strategic Plan, 2017–2021' and 'Law on Higher Education in Kosovo, 2011'. For the purpose of this research, the following changes that were part of the main strategic objectives were selected: new teaching methodologies, providing faculty development in pedagogy, encouraging the continuous capacity building of teaching staff, developing PhD programmes in compliance with the Bologna system, increasing and improving research output, taking advantage of new technology, and implementing degree/study programmes in English. These changes were analysed to understand how they were planned to be implemented, how they were reflected in the vision and mission, and how the organisational culture would support or hinder their implementation.

Results and discussion

The results and discussion part is structured to initially present the answers to the first research question related to the identified dominant organisational cultures, cultural congruence, and discrepancies between current and preferred organisational cultures. Then, it will analyse and discuss the findings

related to the second research question on how the types of changes planned in SPU strategic objectives align with the dominant organisational cultures.

Hierarchy and market culture identified as dominant organisational cultures

Initially, descriptive statistics were run for the 24 statements individually for the assessment of the culture now. The minimum mean of the items was 2.50 and the maximum 3.38, while the standard deviation ranged from 0.92 to 1.19. To examine further the research results regarding the pattern dimensions of the culture, the 24 statements were grouped into four variables in SPSS by placing six designated statements in each variable representing clan, adhocracy, market and hierarchy culture. The means for the grouped variables were as follows: hierarchy (3.04), market (3.03), adhocracy (2.81) and clan (2.71) (see Table 1). These mean results for the four types of culture are not highly differentiated and reflect the OCAI questionnaire authors' findings that 'when the Likert scale is used, respondents tend to rate all quadrants high or all low' (Cameron & Quinn, 2011, p. 184). *Strength of the culture* is determined by the scores with which the respondents rated the given cultures: the higher the score, 'the stronger or more dominant that particular culture is rated to be' (Cameron & Quinn, 2011, p. 83). The findings (see Table 1) indicate that the dominant cultures at the SPU, as assessed by the OCAI questionnaire, are hierarchy culture (3.04) and market culture (3.03).

Table 1

Types of organisational cultures in the SPU as assessed by the OCAI Questionnaire

Types of the organisational culture	NOW (present)
Hierarchy Culture	3.04
Market Culture	3.03
Adhocracy Culture	2.81
Clan Culture	2.71

The results indicate that the basic assumptions, styles and values of hierarchy and market cultures tend to predominate in the SPU. According to the Competing Values Framework, with hierarchy and market as dominant cultures, the university tends to be a very structured and formal place in which to work, with a strong orientation toward results, where the major concern is getting the job done. These values are adopted to maintain internal control and generate efficient, reliable, and predictable results, as well as to face the external environment

and achieve results that justify the university's work to third parties and remain competitive with other universities. The principles that govern the SPU are formal, detailed, and based on rules and procedures, enabling productivity and objectives. Thus, the procedures govern what people do, and they (the people) also tend to be competitive and goal oriented. The leaders consider themselves to be good organisers and coordinators or efficient professionals and regard themselves as competitive and focused on achieving results. The management style is one of adherence to routines that ensure predictability while simultaneously focusing on results. The environment is characterised by rigorous and clear procedures while also being competitive and emphasising the achievement of results. Success is defined in terms of maintaining daily activity, avoiding surprises, and is based on the number of courses running and the number of tasks achieved.

Both hierarchy and market cultures belong to the low quadrants of the Competing Values Framework, sharing the core dimension of the framework that emphasises value creation based on stability, order and control, rather than the upper quadrants, which highlight flexibility, discretion, and dynamism as value creation. This indicates that the SPU tends to be more focused on maintaining internal control and stability by emphasising the values created through standardised rules, regulations, and centralised decision making, as well as through a focus on achieving results.

Organisational culture congruence

In addition to types of culture, OCAI also assesses six cultural dimensions: the dominant characteristics of the organisation, the leadership style, the management of employees, the organisational glue, the strategic emphasis, and the criteria of success. The research results in the SPU also reveal cultural congruence, as they demonstrate how these various aspects of the organisation are aligned. For example, the means of most of the content dimensions of the organisational culture (leadership style, management of employees, organisational glue, strategic emphasis, and success criteria) emphasise the same set of values that belong to hierarchy and market culture. Furthermore, the parametric T-test for independent samples and one-way ANOVA indicate no statistically significant differences between most of the sub-groups of the demographic variables such as gender, age or experience, indicating the homogeneity of the academics' attitudes towards dominant organisational cultures.

Value creation from clan and adhocracy cultures preferred

Another important field of information that the OCAI offers is the discrepancy between the current culture and the culture that the organisation

would prefer to have. To analyse the discrepancy from the results obtained through the OCAI questionnaire administered at the SPU, descriptive statistics were calculated for the 24 statements individually. The minimum mean of the items was 3.87 and the maximum 4.53, while the standard deviation ranged from .66 to 1.21. Furthermore, the 24 statements were grouped into four variables in SPSS by placing the six designated statements in each variable representing clan preferred, adhocracy preferred, market preferred, and hierarchy preferred culture. The mean for the grouped variables under the column 'Preferred' was as follows: adhocracy (4.37), market (4.37), clan (4.33) and hierarchy (4.38). To 'look for the widest differences in what is preferred versus what is now', the mean difference between the statements assessed under the columns 'Preferred' and 'Now' were then calculated (Cameron & Quinn, 2011, p. 82).

Table 2

Comparison between preferred and current organisational culture types at the SUP

	Mean difference	PREFERRED	NOW
Clan Culture	1.62	4.33	2.71
Adhocracy Culture	1.56	4.37	2.81
Hierarchy Culture	1.34	4.38	3.04
Market Culture	1.34	4.37	3.03

Although the respondents rated all quadrants similarly high for their preferred culture types, the research results at the SPU revealed a difference between the preferred culture and the culture now. The highest mean difference is between clan culture preferred and clan culture now (1.62), followed by adhocracy preferred and adhocracy now (1.56) (see Table 2). The results show that the SPU staff prefer to increase value creation from clan and adhocracy cultures, with the main characteristics of teamwork, employee involvement programmes and university commitment to employees (clan), as well as value creation focused on dynamism, innovation and the acceptance of new challenges (adhocracy). These assumptions and values represent the opposite of the values that are related to hierarchy and market culture for the content dimensions scored as of now, while also reflecting a discrepancy between the current organisational culture at the SPU and what the academics would like to the culture be, based on which academic leaders can also '[…] determine a roadmap for change' (Cameron & Quinn, 2011, p. 82).

Planned changes insufficiently aligned with dominant organisational culture types

Document analysis shows that eight strategic areas of focus were defined in the SPU Strategy 2017–2019: teaching, research and service; accreditation and quality control; market-driven degrees, human resources development; system development; fiscal accountability; improvement of financial data information; and globalisation/internationalisation. Some of the planned changes under these areas include the introduction of new teaching methodologies, providing faculty development in pedagogy, encouraging the continuous capacity building of teaching staff, developing PhD programmes in compliance with the Bologna system, increasing and improving research output, taking advantage of new technology, and implementing degree/study programmes in English. These changes were planned to take place within three years, and the action plan was also included in the SPU Strategic Plan 2017–2019. This large and diverse number of objectives may have been influenced by the 'Kosovo Education Strategic Plan, 2017–2021', which also aims to address many prevailing challenges in higher education.

Further, the vision and mission of the SPU were analysed to understand how they reflect these planned changes. A mission expresses the core values of an organisation, and mission statements and intentions for decision making are considered the basis of the formulation of a university's goals and possibly of its strategies (Sporn, 1996; Tierney, 1987;). The vision and mission of the SPU, which is published on the university website and is part of the strategic plan 2017–2019, reads as follows:

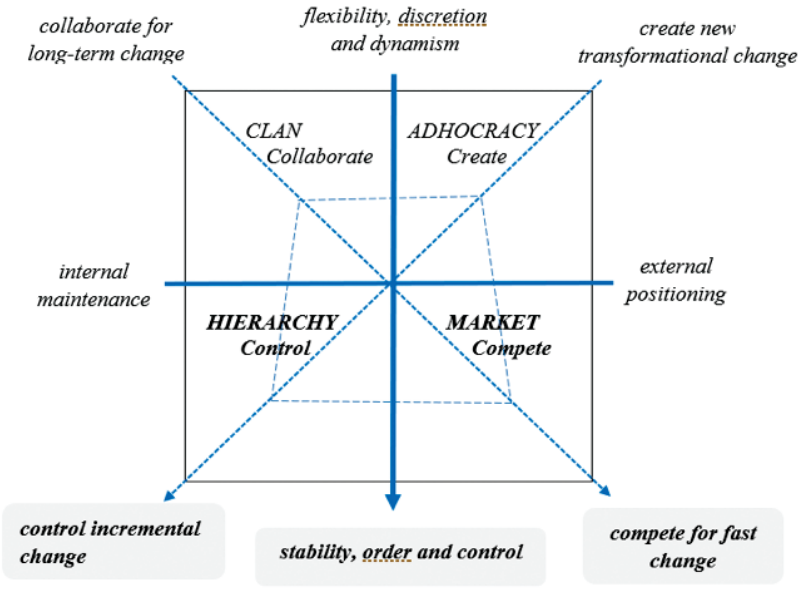
> *Vision: 'The SPU will become a respected public research university, recognised globally for its professionalism, integrity, quality teaching, and research. With an eye towards the future, the SPU will set a new quality standard for higher education in Southern Europe. We will provide our students with world-leading opportunities for learning and discovery. We will set high standards in teaching, scholarship, research and creative work for our teachers and researchers. We will be the engine that drives Kosovo's progress in the 21st century.'*
>
> *Mission: 'The university is an autonomous public institution for higher education, which develops academic education, scientific research, artistic work and professional counselling, and offer fields of academic activities.'* (SPU Strategy 2017–2019)

The vision and mission of the SPU are apparently related to numerous disconnected objectives concentrated in both internal and external effectiveness and are aimed to be achieved within the rather short period of two to four years. Such a broad definition of the vision and mission will also represent a difficulty in communicating the vision and mission to stakeholders and members of the SPU to gain their support. It also implies the necessity to prioritise the objectives and define key performance indicators to be able to reflect them in a more realistic and concise vision and mission. Sporn (1996) explains that if, for example, 'the culture is more internally focused and has decentralised characteristics, the mission as well as intentions will concentrate on internal effectiveness and autonomy of departments' (p. 47). Sporn suggests that goal and strategy formulation should be limited to certain alternatives that fit the culture.

Overall, the findings show that most of the changes included in the SPU strategic plan represent deep or transformation change that will take a long time to be implemented, from 10 to 15 years (Kezar, 2009, p. 21). It also indicates that these types of changes are not sufficiently aligned with SPU dominant hierarchy and market cultures. According to the Competing Values Framework, the identified dominant hierarchy and market culture types will enable the SPU to focus more on small incremental changes that emphasise efficiency, predictability, and continuity, rather than on changes that are new, innovative, unique, and transformational, which are more supported by adhocracy culture. Regarding the approach to change, based on its dominant market culture, the SPU will be able to create short-term, immediate change rather than the long-term, developmental and sustained change that is more strongly supported by clan culture (see Figure 1).

Figure 1

Dominant cultures, competing values and approaches to change in the SPU according to the Competing Values Framework



Conclusions

The overall findings confirm that the Competing Values Framework and OCAI represent a helpful instrument in identifying not only the dominant organisational culture types but also in determining how the organisational culture is related to the planned changes in higher education institutions. Furthermore, the results support the relevance of the Competing Values Framework and OCAI in higher education institutions, as it has been mainly used to assess organisational culture in business and other organisations.

The present study does not intend to promote the idea that organisational culture alone may solve the problems related to planning changes in higher education institutions. Instead, it argues that in addition to other factors, some of which may be specific to developing countries, the role of organisational culture must also be considered when deciding about the types of changes that will be implemented. This research revealed a discrepancy between the identified hierarchy and market cultures and the planned changes in the SPU. It shows that the scope and content of the planned changes are insufficiently related to

the existing dominant cultures in the SPU; or better, the university has not appropriately aligned the scope and content of the planned changes with the existing culture of the university. According to the Competing Values Framework, hierarchy culture is more appropriate for controlled incremental changes, while market culture supports rapid changes. In contrast, most of the changes included in the SPU Strategic Plan are long-term, transformational, and new changes, which are best supported by clan and adhocracy cultures. Overall, the main characteristics of hierarchy and market cultures, which in the present research were identified as the present dominant cultures of the SPU, militate against the changes that the university has planned to implement.

The current scope and content of transformational changes as planned by the SPU would be significantly supported if the academic leaders considered changing the organisational culture. This does not mean that they should diminish the elements of hierarchy and market cultures, such as measurement, holding people responsible, following the rules, monitoring performance, listening to third parties, retaining quality standards and competing with other universities. A cultural change programme would, however, enable academic leaders to increase elements of clan and adhocracy cultures, such as more participation and involvement of academics, more cross-functional teamwork and horizontal communication, a more caring climate, more suggestions from academics, more process innovativeness, and thoughtful risk-taking (Cameron & Quinn, 2011, p. 125). Overall, the organisational culture change could act as a bridge to support the transformational planned changes being implemented more easily, effectively and quickly. One advantage of the SPU in this regard is that clan and adhocracy cultures are the preferred cultures of its academics. This attitude of academics toward preferred clan and adhocracy cultures would significantly facilitate a possible SPU cultural change programme in the future.

Limitations

Although the findings present valid and reliable data for the Studied Public University, the limited sample does not allow for generalising the findings. Insofar as all public higher education institutions in Kosovo function within the same state regulations and in a similar cultural context, the findings could also be relevant to discussions related to other public universities. However, specific differences governing other similar institutions in Kosovo could lead to somewhat different results.

References

Alvesson, M. (1987). Organizations, culture, and ideology. *International Studies of Management & Organization, 17*(3), 4–18.

Alvesson, M. (2002). *Understanding organizational culture*. SAGE Publications.

Anderson, G., & Wenderoth A. (2007). *Facilitating change: Reflections on six years of education development programming in challenging environments*. Universalia Management Group.

Apple, M. W. (2016). Challenging the epistemological fog: The roles of the scholar/activist in education. *European Educational Research Journal, 15*(5), 505–515.

Baer, L. L., Duin A. H., & Bushway, H. (2015). Change Agent Leadership. *Planning for Higher Education, 43*(3), 1–11

Becher, T., & Trowler P. R. (2001). *Academic tribes and territories: Intellectual enquiry and the culture of disciplines*. SRHE and Open University Press.

Berács, J. (2014). Emerging entrepreneurial universities in university reforms: the moderating role of personalities and the social/economic environment. *CEPS Journal*, *4*(2), 9–26.

Bergquist, W. (1992). The four cultures of the academy. Jossey Bass.

Bergquist, W., & Pawlak P. (2007). *Engaging the six cultures of the academy*. Jossey Bass.

Beytekin, O. F., Yalcinkaya, M., Dogan, M., & Karakoc, N. (2010). The organizational culture at the university. *The International Journal of Educational Researchers, 2*(1), 1–13.

Brennan J., & Shah T. (2000). Quality assessment and institutional change: Experiences from 14 countries. *Higher Education 40*, 331–349.

Buller, J. L. (2014). *Change leadership in higher education: A practical guide to academic transformation*. Jossey-Bass.

Cameron, K. S., & Quinn R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework*. Jossey–Bass.

Cameron, K. S., Quinn, R. E., DeGraff, J., & Thakor, A. V. (2006). *Competing values leadership: Creating values in organisations*. Edward Elgar Publishing Limited.

Coates, H., & Goedegebuure, L. (2012). Recasting the academic workforce: Why the attractiveness of the academic profession needs to be increased and eight possible strategies for how to go about this from an Australian perspective. *Higher Education, 64*, 875–889.

Cowden, S., & Singh, G. (2013). *Acts of knowing: Critical pedagogy in, against and beyond the university*. Bloomsbury Academic.

European Commission Kosovo Report. (2019). 20190529-kosovo-report.pdf (europa.eu)

Ferreira, A. I., & Hill, M. M. (2008). Organisational cultures in public and private Portuguese universities: A case study. *Higher Education, 55*(6), 637–650.

Field, A. (2009). *Discovering Statistics Using SPSS*. Sage Publications.

Fredman, N., & Doughney, J. (2012). Academic dissatisfaction, managerial change and neo-liberalism. *Higher Education, 64*(1), 41–58.

Gashi, Q. (2014). Kosovo's public universities – Academic integrity in jeopardy. *Policy Briefs Kosovo,*

Konrad Adenauer Stiftung.

Henkel, M. (2007). Can academic autonomy survive in the knowledge society? A perspective from Britain. *Higher Education and Research Development. 26*(1), 86–99.

Jung, T., Scott, T., Davies, H. T. O., Bower, P., Whalley, D., McNally, R., & Mannion, R. (2009). Instruments for exploring organizational culture: A review of the literature. *Public Administration Review, 69*(6), 1087–1096.

Kezar, A., & Eckel, P. D. (2002). The effect of institutional culture on change strategies in higher education. *The Journal of Higher Education, 73*(4), 435–460.

Kezar, A. (2009). Change in higher education: Not enough or too much. *Change: The Magazine of Higher Learning, 41*(6), 18–23.

Kezar, A. (2014). *How colleges change: Understanding, leading and enacting change*. Routledge.

Latta, G. F. (2009). A process model of organisational change in cultural context (OC_3 Model): The impact of organisational culture on leading change. *Journal of Organisational Change Management, 28*(6), 1013–1037

Louvel, S. (2013). Understanding change in higher education as bricolage: How academics engage in curriculum change. *Higher Education*, *66*(6), 669–691.

Ministry of Education, Science and Technology, Government of Kosovo. (2011). *Law on Higher Education in Kosovo.* https://masht.rks-gov.net/uploads/2015/06/02-ligji-per-arsimin-e-larte-anglisht.pdf

Ministry of Education, Science and Technology, Government of Kosovo. (2016). *Kosovo Education Strategic Plan, 2017–2021.* https://masht.rks-gov.net/uploads/2017/02/20161006-kesp-2017-2021-1.pdf

Omerzel, D. G., Biloslavo, R., & Trnavcevic, A. (2011). Knowledge management and organisational culture in higher education institutions. *Journal for East European Management Studies, 16*(2), 111–139.

ORCA. (2017). "*Hasan Prishtina*" *Slackers*. Dembelet-e-H.P.2_Final_ENG-1.pdf (orca-ks.org)

ORCA. (2019). *The academic integrity of professors of the University of Prishtina*. http://orca-ks.org/wp-content/uploads/2017/12/The-Academic-Integrity-of-Professors-of-the-University-of-Prishtina.pdf

PISA. (2019). *Kosovo – Country Note – PISA 2018 Results.* https://www.oecd.org/pisa/publications/PISA2018_CN_KSV.pdf

Pupovci, D. (2015). Reforming University of Prishtina, mission possible? Top nine challenges and remedies, *Democracy for Development Institute*, *7*, 1–64.

Ramsden, P. (2002). *Learning to lead in higher education*. Routledge.

Rowley, D. J., & Sherman, H. (2003). The special challenges of academic leadership. *Management Decision, 41*(10), 1058–1063.

Schein, E. H. (1985). *Organizational culture and leadership.* Jossey-Bass.

Schein, E. H. (1996). Culture: The missing concept in organization studies. *Administrative Science Quarterly, 41*(2), 229–240.

Schein, E. H. (2004). *Organisational culture and leadership*. Jossey-Bass.

Shugart, S. (2013). The challenge to deep change: A brief cultural history of higher education. *Planning for Higher Education, 41*(2), 7–17.

Smart, J. C., & St. John, E. P. (1996). Organizational culture and effectiveness in higher education: A test of the "culture type" and "strong culture" hypotheses. *Educational Evaluation and Policy Analysis, 18*(3), 219–241.

Smerek, R. E. (2010). Cultural perspectives of academia: Toward a model of cultural complexity. In J. Smart (Eds.), *Higher education: Handbook of theory and research* (pp. 381–383). Springer.

Sporn, B. (1996). Managing university culture: An analysis of the relationship between institutional culture and management approaches. *Higher Education, 32*(1), 41–61.

Stephens, J. C., Hernandez, M. E., Roman, M., Graham, A. C., & Scholz. R. W. (2015). Higher education as a change agent for sustainability in different cultures and contexts. *International Journal of Sustainability in Higher Education,* 9(3), 317–338.

Summak, S. M., & Kalman, M. (2020). A Q-methodological analysis of school principals' decision-making strategies during the change process at schools. *CEPS Journal*, *10*(2), 123–144.

Tierney, W. G. (1987). Facts and constructs: Defining reality in Higher Education. *The Review of Higher Education*, *11*(1), 61–73.

Tierney, W. G. (1988). Organizational culture in higher education: Defining the essentials. *The Journal of Higher Education, 59*(1), 2–21.

Trowler, P. (2008). *Cultures and change in higher education: Theories and practices*. Palgrave Macmillan.

Turk, M., & Ledić, J. (2017). Between teaching and research: Challenges of the academic profession in Croatia. *CEPS Journal*, *6*(1), 95–111.

University of Prishtina. (2016). *Rectors' work program until September 2020*. https://www.uni-pr.edu/inc/doc/Programi-per-rektor2.pdf

University of Prishtina. (2017). *Strategy and Action Plan of the University of Prishtina 2017–2019*. https://www.uni-pr.edu/inc/doc/PLANI-STRATEGJIK2.pdf

University of Prishtina. (2016). *Statute of the University of Prishtina, "Hasan Prishtina"*. https://www.uni-pr.edu/inc/doc/statuti2.pdf

Vaira, M. (2004). Globalization and higher education organizational change: A framework for analysis. *Higher Education, 48*(4), 483–510.

Weiler, H. N. (2005). Ambivalence and the politics of knowledge: The struggle for change in German higher education. *Higher Education, 49(1/2)*, 177–195.

Zgaga, P. (2012). University autonomy and governance between academic freedom and institutional autonomy. In H. G. Schütze, W. Bruneau, A. G., Grosjean (Eds.), *University Governance and Reform: Policy, fads, and experience in international perspective* (pp. 11–22). Palgrave Macmillan.

Biographical note

Iliriana Tahiraj, PhD, is a teacher in the field of educational policies at the Faculty of Education, University of Prishtina in Kosovo. Her research interests include educational leadership, organizational culture, as well as reforms in higher education.

Janez Krek, PhD, is a professor of philosophy of education at the Faculty of Education, University of Ljubljana. His research covers philosophy of education, anthropology of education and education policies. He is the (co)author of 9 books and over 60 articles and book chapters (see http://www.sicris.si/).

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Online Learning During the Covid-19 Pandemic: Readiness and Satisfaction among Indonesian Students

Mohamad Arief Rafsanjani*[1], Heni Purwa Pamungkas[2], Nujmatul Laily[3] and Andri Eko Prabowo[4]

The spread of Covid-19 has affected the entire world, including the education sector in Indonesia. This study examines the relationship between Indonesian students' readiness and students satisfaction with online learning during the Covid-19 pandemic. It used an online questionnaire to reach 518 students as a participant. Structural equation modelling (SEM) with SmartPLS software was utilised to examine the relationship between the variables. The finding indicated four dimensions of student readiness (online student attributes, time management, technical competencies, and online communication competencies) closely related to students' satisfaction with online learning. The result provided an understanding of the condition of online learning satisfaction from students readiness point of view during the Covid-19 pandemic in Indonesia. This study serves as a starting point for stakeholders (government and education institutions) in making future policies.

Keywords: Covid-19, online-learning, students readiness, students satisfaction

1 *Corresponding Author. Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia; mohamadrafsanjani@unesa.ac.id.
2 Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia.
3 Faculty of Economics and Business, Universitas Negeri Malang, Indonesia.
4 Faculty of Teacher Training and Education, Universitas Islam Riau, Indonesia.

Spletno učenje med pandemijo covida-19: pripravljenost in zadovoljstvo indonezijskih študentov

Mohamad Arief Rafsanjani, Heni Purwa Pamungkas, Nujmatul Laily in Andri Eko Prabowo

Širjenje pandemije covida-19 je prizadelo ves svet, tudi izobraževalni sistem v Indoneziji. Prispevek preučuje odnos med pripravljenostjo in zadovoljstvom indonezijskih študentov s spletnim učenjem med pandemijo covida-19. Uporabili smo spletni vprašalnik, ki je zajel 518 študentov. Za preučevanje razmerja med spremenljivkami je bilo uporabljeno modeliranje strukturnih enačb (SEM) s programsko opremo SmartPLS. Ugotovitve so pokazale, da so štiri razsežnosti pripravljenosti študentov (lastnosti študentov na spletu, upravljanje časa, tehnične kompetence in kompetence spletnega komuniciranja) tesno povezane z zadovoljstvom študentov s spletnim učenjem. Rezultat je omogočil razumevanje stanja zadovoljstva s spletnim učenjem z vidika pripravljenosti študentov med pandemijo covida-19 v Indoneziji. Raziskava je izhodišče za deležnike (vlado in izobraževalne ustanove) pri oblikovanju prihodnjih politik.

Ključne besede: covid-19, spletno učenje, pripravljenost študentov, zadovoljstvo študentov

Introduction

The spread of covid-19 has impacted various sectors, including the education sector (Assunção Flores & Gago, 2020; Blankenberger & Williams, 2020; Kalloo et al., 2020; Murphy, 2020; Quezada et al., 2020; Scull et al., 2020; Verma et al., 2020). Indonesia is affected by Covid-19. This situation forces the Indonesian government to take learning from home policy using distance learning methods, such as web-based and m-learning. Of course, this policy has two different impacts. The policy helps prevent the spread of Covid-19 and encourages all educational institutions to adopt technology in learning activities; however, there are many challenges to prepare comprehensive online courses for developing countries, such as Indonesia.

Unlike in developed countries, the adoption of technology in the developing country's learning process is lacking. It is voluntary and limited because of the lack of resources and government support (Acharya & Lee, 2018; Ansong et al., 2016; Mathema, 2007; Tagoe, 2012). As in other developing countries, the progress of technology adoption in the learning process is slow in Indonesia. Previous research revealed that the challenges of the adoption include a lack of infrastructure (insufficient internet access), staff reluctance to adopt e-learning, technical skills and student willingness to learn, and inadequate experience with e-learning (Anggraeni & Sole, 2018; Chaeruman, 2018; Kaunang & Usagawa, 2017; Kuntoro & Al-Hawamdeh, 2003; Lestariyanti, 2020; Pratama & Arief, 2019).

Despite so many challenges, since March 2020, the Indonesian government has implemented a learning-from-home policy to prevent the spread of Covid-19. However, after months, many students do not feel satisfied with the online distance learning method. UNICEF's survey showed that 66% of students felt uncomfortable with learning from home, and most (87%) want to go back to studying in school as they did before the covid-19 pandemic (Karana, 2020; UNICEF, 2020). Another survey by the Ministry of Women Empowerment and Child Protection of the Republic of Indonesia showed similar results: 58% of children were not happy with learning from home (Kemenpppa, 2020). The study also showed that most students wanted to return to school soon (Handarini & Wulandari, 2020).

The students' satisfaction which online learning was related to their acceptance or the degree of comfort with e-learning (Liaw & Huang, 2013). The term 'satisfaction' also refers to the pleasure they felt when carrying out a necessary or required action or when they get what they need/want (Liaw & Huang, 2013; Shee & Wang, 2008). Many factors can explain the students' satisfaction

with online learning. Previous studies showed several predictors, such as engaged learning, agency, and assessment (Dziuban et al., 2015); perceived self-efficacy, perceived anxiety, interactive learning environments, and perceived usefulness (Liaw & Huang, 2013); perceived usefulness, and perceived of ease (Ashrafi et al., 2020; Goh et al., 2014; Joo et al., 2016). Most of those studies used the Technology Acceptance Model (TAM) as antecedents to predict students' intention and students' satisfaction with online learning.

Besides, some researchers noticed another factor related to students satisfaction and experience of online learning: students readiness (Liaw & Huang, 2013; Yilmaz, 2017). However, only a few studies have examined online learning readiness with regards to students' satisfaction; therefore, more research is needed. The current research attempts to fill the gap by exploring the predictor of students satisfaction with online learning using students readiness instead of the technology acceptance model (TAM). Furthermore, Indonesia is a developing country where distance learning with technology (e.g., online learning) was not as familiar as in developed countries. Nevertheless, the Covid-19 pandemic forces all learning processes to be carried out from home using online learning. Thus, it would be interesting to capture and discover student satisfaction with online learning using students readiness as a predictor.

Theoretical framework

Over the years, many scholars have been interested in understanding student satisfaction because of its crucial role in a learning activity, which is why many teachers always seek feedback from students at the end of the lesson. The teachers would be able to design a future efficient course by understanding students' satisfaction (Hackman & Walker, 1990).

In general, student satisfaction can be described as the student's satisfaction and happiness related to the various aspects of the service they received (Karataş & Şimşek, 2009; Yilmaz, 2017). Moreover, satisfaction is a construct that is directly derived from the service components. The students' satisfaction in an online course environment is a multidimensional and complex construct (Dziuban et al., 2015; Wei & Chou, 2020; Yilmaz, 2017). There are various aspects regarding studentso satisfaction with online learning: curriculum, instructor presence and feedback, course structure, discussion forum, technological features, instructional style, interaction, materials, technical support, and learning styles (Wei & Chou, 2020; Yilmaz, 2017).

Most researchers explored students' satisfaction with online learning using the technology acceptance model (TAM) as an antecedent. In contrast, the present study has attempted to capture students satisfaction from a different

angle. As observed by some researchers, students' readiness is one of the determinants of their satisfaction with online learning (Liaw & Huang, 2013; Yilmaz, 2017). The idea or concept about students' readiness for online learning was first put forward by Warner et al. (1998). They divided students' readiness into three key dimensions: student preference of learning mode, student competence and confidence in using computers, the internet, and electronic communication, and student ability in self-directed learning.

Over the years, students' readiness has been explored across various constructs. Based on the literature review regarding students' readiness, four common constructs have arisen: 'online student attributes, time management, technical competencies, and online communication competencies' (Martin et al., 2020).

There are four crucial factors in online student attributes (OSA): self-regulated learning, self-directed learning, locus of control, and academic self-efficacy (Martin et al., 2020). These factors were positively related to students satisfaction (Kuo et al., 2013). Several studies support this opinion. The higher the self-directed learning or level of learner control through the self-discipline of the online learners, the higher chances of success in online learning (Lin & Hsieh, 2001). Self-direction and interaction desire encourage students' achievement in the distance learning environment (McVay, 2001). Another study shows that online learners who have the locus of control also tend to have good self-motivation and self-direction (Chang & Ho, 2009). The literature also shows that academic self-efficacy is an internal factor in the students' readiness for online learning. Additionally, academic self-efficacy is linked to motivation, persistence, and performance (Caprara et al., 2011; Rafsanjani, 2014).

Regarding time management (TM), scholars have associated learning self-management with students readiness for online learning (Martin et al., 2020; Zimmerman & Kulikowich, 2016). Online learning includes synchronous and asynchronous learning. One of the toughest challenges in asynchronous learning is self-discipline, which is about keeping up with the courses, completing and submitting the assignments on time, and actively participating in discussions (Discenza et al., 2001; Garrison et al., 2019; Roper, 2007). Another study also shows that the better self-management, the better the learner ability in managing time (Smith, 2005). Hence, students must have good time management to obtain satisfactory results in the online environment.

Regarding online communication competencies (OC), several studies indicate that one of the characteristics of students readiness is their ease with online learning (Martin et al., 2020; Smith, 2005). The convenience in online learning refers to the willingness of the student to interact and to communicate

with the teacher and peers in the online environment (i.e., using a discussion forum, email, chat) (McVay, 2001; Smith, 2005). Furthermore, another study reveals that the better the interactions in online learning, the better the chances for students to meet their individual needs for learning (Kaymak & Horzum, 2013). Therefore, the students' willingness to engage in online discussion is closely related to their readiness and become a crucial element for online learning.

Regarding technical competencies (TC), this term refers to finding and utilising digital information and technological tools (e.g., computer skills, internet skills). Previous studies showed the technical competencies play a critical role (Cho & Shen, 2013; Martin et al., 2020; Shi et al., 2011; Tsai & Tsai, 2003) and are closely related to course satisfaction in the online learning environment (Bolliger & Halupa, 2012). Moreover, students with high technical skills show better abilities in web-based online learning than students with low technical skills (Tsai & Tsai, 2003). Therefore, the proficiency of technical competencies supports success in an online learning environment.

In summary, the current research explored students' satisfaction with online learning using students' readiness as a predictor. This research also attempted to examine the dimension that foundational to students' readiness for online learning. Hence, based on the theories, the research hypotheses are:

H1. Online student attributes positively affect online learning satisfaction.

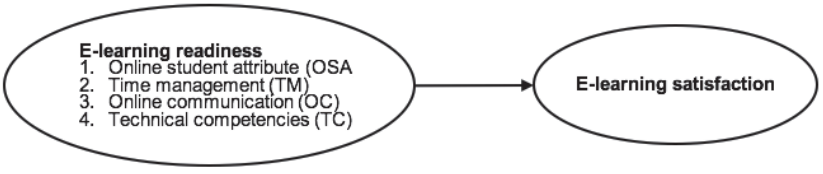
H2. Time management positively affects online learning satisfaction.

H3. Communication positively affects online learning satisfaction.

H4. Technical competencies positively affect online learning satisfaction.

Figure 1

Research model



Method

Participants

The survey was conducted randomly on 550 students from 19 universities on five major islands in Indonesia (i.e., Sumatra, Java, Kalimantan,

Sulawesi, and Papua). All the participants had to meet the following criteria: coming from the universities that implemented the distance learning policy caused by the spread of Covid-19 and following the learning process from home using web-based, mobile learning, and other equivalent media. Among the selected sample, 32 were dropped because many questionnaire items were empty and did not meet the sample criteria. We utilised an online questionnaire to reach all the research participants. We sent an email to respondents based on data obtained from the relevant ministries (Ministry of Education and Culture of the Republic of Indonesia). In the email, we invited the respondents to participate in this research. We explained the research objectives, the significance of the study and the variables to be investigated. If they were willing to become participants, they could complete a questionnaire on the link (URL) provided.

Instruments

We adopted the instruments from the previous studies. First, a linguist translated the instrument into Indonesian to suit the context of our respondents. Then, experts with online learning backgrounds reviewed the items to ensure that respondents could understand each questionnaire item properly.

To measure students readiness, we adapted an instrument developed by Martin et al. (2020). The scales consisted of eighteen items to measure four dimensions of students readiness for online learning: online student attributes, time management, communication, and technical competencies. The instrument was measured on a five-point Likert scale, from strongly disagree (1) to strongly agree (5). A high score indicates high online learning readiness and vice versa. The *loading factors* of all items was calculated as >0.8 and the *cross-loading* as >0.8 for each dimension. Cronbach's alpha coefficient of the instruments was calculated for each dimension: 0.95 for online student attribute, 0.92 for time management, 0.92 for communication, and 0.94 for technical competencies.

We also adapted the online courses satisfaction scale (OCSS), which Wei and Chou (2020) developed to measure students' satisfaction with online learning. We are using four items to measure students' general satisfaction related to the instructor and the design of courses in the online learning environment. The instrument was measured on a five-point Likert scale, from strongly disagree (1) to strongly agree (5). A high score indicates high online learning satisfaction and vice versa. The validity of the instruments was calculated as > .8 for the *loading factors* of each item and > .8 for the *cross-loading*.

Data analysis

This study examined the research model using structural equation modelling with SmartPLS software to determine the relationship among the variables and examine the dimensions underlying students' online learning readiness.

Results

Respondents characteristics

The respondents' characteristics of this study are presented in Table 1. In more detail, females dominate this study with more than 74% and males for the rest (25%). Furthermore, judging from the academic standing, second-year students are on the top, followed by first and third-year students with a slight disparity. Last, the students from economics and business disciplines became most respondents, followed by education, engineering, law and arts.

Table 1

Respondents characteristics (N = 518)

Characteristics		∑	%
Gender	Female	385	74.32%
	Male	133	25.68%
Academic Standing	1st-year student	162	31.27%
	2nd-year student	176	33.98%
	3rd-year student	143	27.61%
	4th-year student	37	7.14%
Discipline	Economics, business, management & accounting	166	32.05%
	Law	55	10.62%
	Engineering	72	13.90%
	Arts & humanities	46	8.88%
	Education	98	18.92%
	Others	81	15.64%

Relationship among the variables

We conducted a Pearson correlation to investigated the relationship between the variables. The results are shown in Table 2, which shows the correlation (r-value) between antecedent (readiness) and consequent (satisfaction) is in the range .325 - 0.508 that indicates moderate to strong correlation (Pallant, 2020). The first and third dimension of readiness has r values of .508 and .501.

These results indicated a strong correlation between online student attributes and students satisfaction, as well as between online communication and students' satisfaction. Then, the second and fourth dimensions have r-values of .435 and .325. These indicated a moderate correlation between time management and students satisfaction; technical competencies and students satisfaction

Table 2
Correlation among variables

	Readiness-OSA	Readiness-TM	Readiness-OC	Readiness-TC
Readiness-OSA	1			
Readiness-TM	.401**	1		
Readiness-OC	.499**	.438**	1	
Readiness-TC	.274**	.319**	.341**	1
Satisfaction	.508**	.435**	.501**	.325**

Note. **. Correlation is significant at the .01 level (2-tailed).

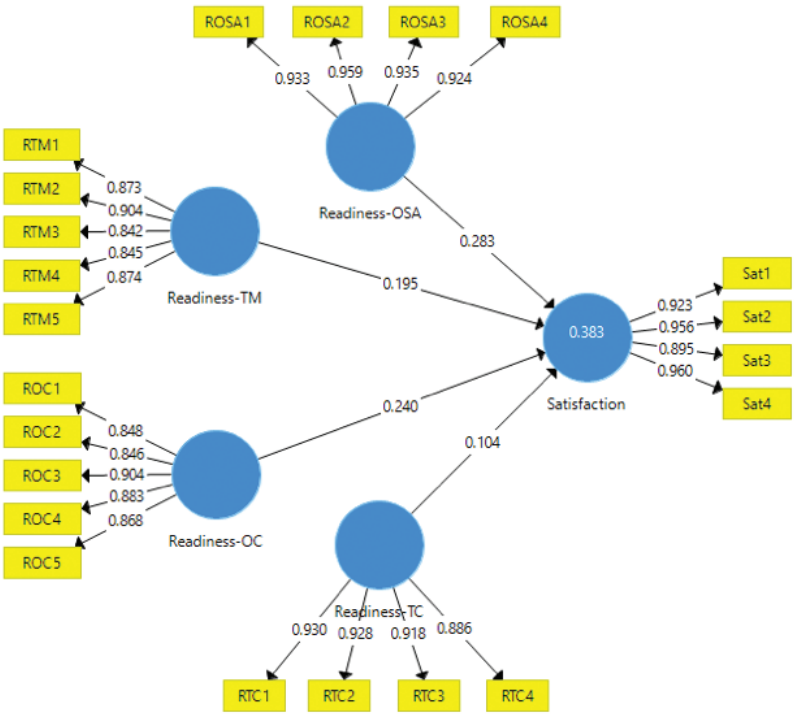
Path analysis

We conduct structural equation modelling (SEM) to examine the research hypotheses. The results show that all the hypotheses are accepted (Table 2). The results indicate that online learning readiness has a significant effect on online learning satisfaction. Furthermore, among the students' readiness dimensions, the online student attribute is the dimension of readiness with the greatest influence on students satisfaction (β = .283), followed by online communication (β = .240), time management (β = .195), and technical competencies (β = .104).

Table 3
The result of hypotheses test

Hypotheses		Path Coeff.	St. Dev.	P-Val.	Decision
H1	Readiness-OSA → Satisfaction	.283	.041	.000	Accepted
H2	Readiness-TM → Satisfaction	.195	.041	.000	Accepted
H3	Readiness-OC → Satisfaction	.240	.046	.000	Accepted
H4	Readiness-TC → Satisfaction	.104	.042	.019	Accepted

Figure 2
Structural model with standardised path coefficient



Discussion

When we examined the research hypotheses (Table 2), it was seen that online learning readiness positively affects online learning satisfaction. The current finding indicates that the higher students online learning readiness, the higher students online learning satisfaction. In other words, online learning readiness is one of the predictors of online learning satisfaction.

Furthermore, we examined the effect of four readiness dimensions on students online learning satisfaction. First, online student attributes (OSA) dimension. The result showed OSA had a significant positive effect on students online learning satisfaction. The OSA consisted of self-regulated learning and self-directed learning, which indicated that students with good self-regulated learning (e.g., able to set learning goals under deadlines and be self-disciplined) and good self-directed learning (e.g., able to utilise and to optimise various learning resources) are more capable of adapting to online learning designs.

Hence, the design of courses (online or offline learning) was not a big deal for them. They can adapt quickly to new learning designs (e-learning).

Moreover, self-regulated learning and self-directed learning can play an essential role in online learning activities, which are often dominated by individual learning activities. Hence, the students who do not have self-directed learning skills would encounter problems in the online learning process, e.g., did not know what to do and feeling lost. This finding was in line with a previous study that shows that self-regulated learning and self-directed learning plays a pertinent factor in student preparedness. In addition, the current results indicated that the increase in students online learning satisfaction is in line with the increase in the student online attributes. This finding strengthened the previous study that online student attributes positively correlated with student satisfaction (Kuo et al., 2013).

Regarding the time management (TM) dimension, the result of the model showed that TM is another dimension of readiness that affect students online learning satisfaction. As proposed by the scholars, time management reflects learning self-management. The student with good time management will be able to deal with the online learning environment's challenges. In the online learning environment, the students are required to keep up with the course's pace, such as the course deadline (completing and submitting the assignments on time), synchronous and asynchronous learning method, and actively participating in the discussion. Hence, the student with good time management will obtain satisfactory results in the online environment. This finding strengthens the previous study that shows that managing time plays a crucial factor in readiness, achievement and satisfaction in the online learning environment (Smith, 2005).

Regarding the online communication (OC) dimension, data analysis showed that it is another online readiness dimension that affects students online learning satisfaction. According to the previous study, online communication is closely related to students' ease with online learning (Martin et al., 2020). When students feel at ease with online learning, they will interact/communicate with teachers/peers without difficulty. This study showed the student willingness to interact with teachers or peers in the online learning environment related to students readiness, which will have a positive impact on learning satisfaction.

Furthermore, online communication is also related to how good students understand how to communicate and express themselves in an online learning environment. This study also revealed that the better the students' online communication skills, the better the ability to adapt to the online learning environment, positively impacting learning satisfaction. The current finding is similar to that of previous studies revealing that good quality of interaction

and communication can increase learning satisfaction (Yilmaz, 2017), and the better the interactions in online learning, the better the students' chances to meet their individual learning needs and learning outcome (Gülbahar, 2009; Kaymak & Horzum, 2013).

Regarding technical competencies (TC), the result showed that they function as another dimension of readiness that affects online learning satisfaction. This study revealed that students who can utilise technological tools (such as computers and the internet) to find digital information report higher satisfaction. Students with good technical competencies show better performance because almost all activities in online learning are carried out using technological tools (e.g., computers and internet). This study is similar to previous ones that demonstrate that technical competencies are crucial and related to course satisfaction in the online learning environment (Bolliger & Halupa, 2012; Cho & Shen, 2013; Martin et al., 2020; Shi et al., 2011).

Conclusion and implication

In summary, this study reported that dimensions of students online learning readiness play an important predictor of students online learning satisfaction. Our finding confirmed that students online learning readiness positively affect students' online learning satisfaction. In the context of Indonesian students, the Covid-19 pandemic has forced all educational institutions to switch to using technology-based learning (web-based learning or learning management systems). As a developing country, such sudden change is not easy due to many limitations, especially lack of infrastructure (inadequate internet access), students and staff's reluctance, lack of technical skills, and inadequate experience with online learning.

When the questionnaire results are examined in more detail, they showed that Indonesia's students' readiness and satisfaction with online learning was low. These findings confirmed the previous study that the students' readiness was closely related to students' satisfaction in the online learning environment. The finding indicated that as students online learning readiness increase, they will be more satisfied with online learning, and vice versa. This study provided a short description of the impact of the Covid-19 pandemic on Indonesia's education sector, especially in higher education, which is about students' readiness and students satisfaction in online learning.

The Covid-19 pandemic has illustrated that Indonesia's education sector is not ready to adopt technological developments, especially in online learning. This study serves as a starting point for all stakeholders in policymaking in the future. We recommend that all universities in Indonesia consider making fundamental changes to be more adaptive to technological developments,

especially in learning activities. We also encourage the government (such as the Ministry of Education and Culture, and the Ministry of Communication and Information Technology) to provide the infrastructure to accelerate online learning adoption in Indonesia. This is very important. The education sector must keep pace with the rapid development of technology, especially in the learning process. Therefore, all parties' participation is needed so that the education sector in Indonesia can adapt to technological developments. With the adoption of technology, we hope that the education sector can reduce dependence on offline learning and switch online.

Limitation

The current research used unbalanced participants from gender perspectives. Most of the participants are female (more than 74%). However, according to the previous study, gender has a relationship with lives and job satisfaction (Joshanloo & Jovanović, 2020; Jovanović, 2017; Okpara et al., 2005). Therefore, we are concerned about the interference from gender perspectives on the current result. Furthermore, the research was conducted on students of higher education as participants. This study's results cannot be generalised to contexts outside higher education (middle and elementary schools) because of different characteristics. For that reason, more research is needed to confirm and generalise our finding.

References

Acharya, B., & Lee, J. (2018). Users' perspective on the adoption of e-learning in developing countries: The case of Nepal with a conjoint-based discrete choice approach. *Telematics and Informatics, 35*(6), 1733–1743. https://doi.org/https://doi.org/10.1016/j.tele.2018.05.002

Anggraeni, D. M., & Sole, F. B. (2018). E-Learning Moodle, Media Pembelajaran Fisika Abad 21. *Jurnal Penelitian dan Pengkajian Ilmu Pendidikan: e-Saintika, 1*(2), 57. https://doi.org/10.36312/e-saintika.v1i2.101

Ansong, E., Boateng, S. L., Boateng, R., & Effah, J. (2016). *Determinants of E-Learning Adoption in Universities: Evidence from a Developing Country.* 49th Hawaii International Conference on System Sciences (HICSS).

Ashrafi, A., Zareravasan, A., Rabiee Savoji, S., & Amani, M. (2020). Exploring factors influencing students' continuance intention to use the learning management system (LMS): A multi-perspective framework. *Interactive Learning Environments*, 1–23. https://doi.org/10.1080/10494820.2020.1734028

Assunção Flores, M., & Gago, M. (2020). Teacher education in times of COVID-19 pandemic in Portugal: national, institutional and pedagogical responses. *Journal of Education for Teaching*, 1–10.

https://doi.org/10.1080/02607476.2020.1799709

Blankenberger, B., & Williams, A. M. (2020). COVID and the impact on higher education: The essential role of integrity and accountability. *Administrative Theory & Praxis, 42*(3), 404–423. https://doi.org/10.1080/10841806.2020.1771907

Bolliger, D. U., & Halupa, C. (2012). Student perceptions of satisfaction and anxiety in an online doctoral program. *Distance Education, 33*(1), 81–98. https://doi.org/10.1080/01587919.2012.667961

Caprara, G. V., Vecchione, M., Alessandri, G., Gerbino, M., & Barbaranelli, C. (2011). The contribution of personality traits and self-efficacy beliefs to academic achievement: A longitudinal study. *Br J Educ Psychol, 81*(1), 78–96. https://doi.org/10.1348/2044-8279.002004

Chaeruman, U. A. (2018). Encouraging E-Learning Implementation. *Jurnal Teknodik, 12*(1), 025. https://doi.org/10.32550/teknodik.v12i1.417

Chang, M.-M., & Ho, C.-M. (2009, 2009/07/01). Effects of locus of control and learner-control on web-based language learning. *Computer Assisted Language Learning, 22*(3), 189–206. https://doi.org/10.1080/09588220902920094

Cho, M.-H., & Shen, D. (2013, 2013/11/01). Self-regulation in online learning. *Distance Education, 34*(3), 290–301. https://doi.org/10.1080/01587919.2013.835770

Discenza, R., Howard, C., & Schenk, K. D. (2001). *The Design and Management of Effective Distance Learning Programs*. Idea Group Pub.

Dziuban, C., Moskal, P., Thompson, J., Kramer, L., Decantis, G., & Hermsdorfer, A. (2015). Student Satisfaction with Online Learning: Is it a Psychological Contract? *Online Learning, 19*(2). https://doi.org/10.24059/olj.v19i2.496

Garrison, R., Cleveland-Innes, M., & Fung, T. (2019). Student role adjustment in online communities of inquiry: Model and instrument validation. *Online Learning, 8*(2), 61–74. https://doi.org/10.24059/olj.v8i2.1828

Goh, W. W., Hong, J. L., & Gunawan, W. (2014). Exploring Lecturers' Perceptions of Learning Management System: An Empirical Study Based on TAM. *International Journal of Engineering Pedagogy (iJEP), 4*(3), 48. https://doi.org/10.3991/ijep.v4i3.3497

Gülbahar, Y. (2009). *E-learning*. Pegem A Publication.

Hackman, M. Z., & Walker, K. B. (1990, 1990/07/01). Instructional communication in the televised classroom: The effects of system design and teacher immediacy on student learning and satisfaction. *Communication Education, 39*(3), 196–206. https://doi.org/10.1080/03634529009378802

Handarini, O. I., & Wulandari, S. S. (2020). Online learning as an alternative in learning from home during the Covid-19 pandemic. *JPAP (Jurnal Pendidikan Administrasi Perkantoran), 8*(3).

Joo, Y. J., Kim, N., & Kim, N. H. (2016, 2016/08/01). Factors predicting online university students' use of a mobile learning management system (m-LMS). *Educational Technology Research and Development, 64*(4), 611–630. https://doi.org/10.1007/s11423-016-9436-7

Joshanloo, M., & Jovanović, V. (2020, 2020/06/01). The relationship between gender and life satisfaction: analysis across demographic groups and global regions. *Archives of Women's Mental Health, 23*(3), 331–338. https://doi.org/10.1007/s00737-019-00998-w

Jovanović, V. (2017). Measurement Invariance of the Serbian Version of the Satisfaction With Life Scale Across Age, Gender, and Time. *European Journal of Psychological Assessment, 35*(4), 555–563. https://doi.org/10.1027/1015-5759/a000410

Kalloo, R. C., Mitchell, B., & Kamalodeen, V. J. (2020). Responding to the COVID-19 pandemic in Trinidad and Tobago: challenges and opportunities for teacher education. *Journal of Education for Teaching, 46*(4), 452–462. https://doi.org/10.1080/02607476.2020.1800407

Karana, K. P. (2020). *The survey during learning from home policy among the students in Indonesia*. UNICEF Indonesia. https://www.unicef.org/indonesia/id/press-releases/indonesia-survei-terbaru-menunjukkan-bagaimana-siswa-belajar-dari-rumah

Karataş, S., & Şimşek, N. (2009). Comparisons of Internet-Based and Face-to-Face Learning Systems Based on "Equivalency of Experiences" According to Students' Academic Achievements and Satisfactions. *Quarterly Review of Distance Education, 10*(1), 65–74.

Kaunang, S. T. G., & Usagawa, T. (2017). A New Approach for Delivering e-Learning Complex Courses in Indonesia. *International Journal of e-Education, e-Business, e-Management e-Learning, 7*(2), 132–145. https://doi.org/https://doi.org/10.17706/IJEEEE.2017.7.2.132-145

Kaymak, Z. D., & Horzum, M. B. (2013). Relationship between online learning readiness and structure and interaction of online learning students. *Educational Sciences: Theory and Practice, 13*(3), 1792–1797. https://doi.org/10.12738/estp.2013.3.1580

Kemenpppa. (2020). *Hearing Indonesian children's voices about covid-19 through the AADC-19 survey*. Publikasi Dan Media Kementerian Pemberdayaan Perempuan dan Perlindungan Anak. https://www.kemenpppa.go.id/index.php/page/read/29/2638/mendengar-suara-anak-indonesia-tentang-covid-19-melalui-survei-aadc-19

Kuntoro, R. D., & Al-Hawamdeh, S. (2003). E-Learning in Higher Educational Institutions in Indonesia. *Journal of Information & Knowledge Management, 2*(4), 361–374. https://doi.org/10.1142/S0219649203000553

Kuo, Y.-C., Walker, A. E., Belland, B. R., & Schroder, K. E. E. (2013). A predictive study of student satisfaction in online education programs. *The International Review of Research in Open and Distributed Learning, 14*(1), 16–39. https://doi.org/https://doi.org/10.19173/irrodl.v14i1.1338

Lestariyanti, E. (2020). Mini-Review Pembelajaran Daring Selama Pandemi Covid-19: Keuntungan dan Tantangan. *Jurnal Prakarsa Paedagogia, 3*(1), 89–96. https://doi.org/10.24176/jpp.v3i1.4989

Liaw, S.-S., & Huang, H.-M. (2013, 2013/01/01/). Perceived satisfaction, perceived usefulness and interactive learning environments as predictors to self-regulation in e-learning environments. *Computers & Education, 60*(1), 14–24. https://doi.org/https://doi.org/10.1016/j.compedu.2012.07.015

Lin, B., & Hsieh, C.-t. (2001, 2001/11/01/). Web-based teaching and learner control: a research review. *Computers & Education, 37*(3), 377–386. https://doi.org/https://doi.org/10.1016/S0360-1315(01)00060-4

Martin, F., Stamper, B., & Flowers, C. (2020). Examining Student Perception of Readiness for Online Learning: Importance and Confidence. *Online Learning, 24*(2). https://doi.org/10.24059/olj.v24i2.2053

Mathema, K. B. (2007). Crisis in education and future challenges for Nepal. *European Bulletin of Himalayan Research, 31*(Spring), 46–66.

McVay, M. (2001). *How to Be a Successful Distance Learning Student: Learning on the Internet (2nd ed.)*. Prentice Hall.

Murphy, M. P. A. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy, 41*(3), 492–505. https://doi.org/10.1080/13523260.2020.1761749

Okpara, J. O., Squillace, M., & Erondu, E. A. (2005). Gender differences and job satisfaction: a study of university teachers in the United States. *Women in Management Review, 20*(3), 177–190. https://doi.org/10.1108/09649420510591852

Pallant, J. (2020). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS* (7th ed.). Routledge. https://doi.org/https://doi.org/10.4324/9781003117452

Pratama, H. F. A., & Arief, S. (2019). Pengaruh pemanfaatan e-learning, lingkungan teman sebaya, dan motivasi belajar terhadap prestasi belajar. *J-PIPS (Jurnal Pendidikan Ilmu Pengetahuan Sosial), 6*(1), 1–12. https://doi.org/https://doi.org/10.18860/jpips.v6i1.7811

Quezada, R. L., Talbot, C., & Quezada-Parker, K. B. (2020). From Bricks and Mortar to Remote Teaching: A Teacher Education Program's Response to COVID-19. *Journal of Education for Teaching, 46*(4), 472–483. https://doi.org/10.1080/02607476.2020.1801330

Rafsanjani, M. A. (2014). The influence of parental involvement perceptions on students' economic learning outcomes. *Jurnal Pendidikan Akuntansi (JPA), 2*(1), 1–9. https://doi.org/http://dx.doi.org/10.26675/jabe.v2i1.6046

Roper, A. R. (2007). How students develop online learning skills. *EDUCAUSE Review*, 62–65. https://er.educause.edu/articles/2007/1/how-students-develop-online-learning-skills

Scull, J., Phillips, M., Sharma, U., & Garnier, K. (2020). Innovations in teacher education at the time of COVID19: an Australian perspective. *Journal of Education for Teaching*, 1–10. https://doi.org/10.1080/02607476.2020.1802701

Shee, D. Y., & Wang, Y.-S. (2008, 2008/04/01/). Multi-criteria evaluation of the web-based e-learning system: A methodology based on learner satisfaction and its applications. *Computers & Education, 50*(3), 894–905. https://doi.org/https://doi.org/10.1016/j.compedu.2006.09.005

Shi, J., Chen, Z., & Tian, M. (2011). Internet self-efficacy, the need for cognition, and sensation seeking as predictors of problematic use of the internet. *Cyberpsychol Behav Soc Netw, 14*(4), 231–234. https://doi.org/10.1089/cyber.2009.0462

Smith, P. J. (2005). Learning preferences and readiness for online learning. *Educational Psychology, 25*(1), 3–12. https://doi.org/10.1080/0144341042000294868

Tagoe, M. (2012). Students' perceptions on incorporating elearning into teaching and learning at the University of Ghana. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), 8*(1), 91–103.

Tsai, M.-J., & Tsai, C.-C. (2003, 2003/01/01). Information searching strategies in web-based science learning: the role of internet self-efficacy. *Innovations in Education and Teaching International, 40*(1), 43–50. https://doi.org/10.1080/1355800032000038822

Unicef. (2020). *Plans for back to school during Covid-19*. https://indonesia.ureport.in/opinion/4283/

Verma, G., Campbell, T., Melville, W., & Park, B.-Y. (2020). Science Teacher Education in the Times of the COVID-19 Pandemic. *Journal of Science Teacher Education, 31*(5), 483–490. https://doi.org/10.1080/1046560x.2020.1771514

Warner, D., Christie, G., & Choy, S. (1998). *Readiness of VET clients for flexible delivery including online learning*. Australian National Training Authority.

Wei, H.-C., & Chou, C. (2020). Online learning performance and satisfaction: do perceptions and readiness matter? *Distance Education, 41*(1), 48–69. https://doi.org/10.1080/01587919.2020.1724768

Yilmaz, R. (2017). Exploring the role of e-learning readiness on student satisfaction and motivation in flipped classroom. *Computers in Human Behavior, 70*, 251–260. https://doi.org/https://doi.org/10.1016/j.chb.2016.12.085

Zimmerman, W. A., & Kulikowich, J. M. (2016, 2016/07/02). Online Learning Self-Efficacy in Students With and Without Online Learning Experience. *American Journal of Distance Education, 30*(3), 180–191. https://doi.org/10.1080/08923647.2016.1193801

Biographical note

Mohamad Arief Rafsanjani, M.Ed., is an assistant professor in the field of economics education on the Faculty of Economics and Business at Universitas Negeri Surabaya, Indonesia. His research interest include teaching and learning in economics, educational psychology, and action research.

Heni Purwa Pamungkas, M.Ed., is an assistant professor the field of economics education, Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia. Her research interests include learning assessment, teaching and learning economics, student' learning motivation, and curriculum development.

Nujmatul Laily, MSA, is an assistant professor in the field of accounting education, Faculty of Economics and Business, Universitas Negeri Malang, Indonesia. His research interest include financial literacy, educational ethics, digital learning media, and students entrepreneurial skills.

Andri Eko Prabowo, PhD, is an assistant professor in the field of accounting education, Faculty of Teacher Training and Education, Universitas Islam Riau, Indonesia. His research interest include class action research, sharia economics, and entrepreneurship.

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Through Thick and Thin: Lower Secondary School Students' Barriers to Learning under Covid-19 Conditions

Rasa Nedzinskaite-Maciuniene*[1], Egle Stasiunaitiene[2] and Gerda Simiene[3]

At the global level, the Covid-19 pandemic has affected the whole education system, ranging from pre-school to higher education. Without any prior preparation, the teaching process has undergone a massive transition from face-to-face to distance learning. This transition has posed many challenges. This article aims to reveal what barriers to learning lower secondary school students face and how schools can minimise these barriers. A systematic review of the academic literature from two well-known databases, EBSCO and ScienceDirect, was performed to identify and determine the prevailing consistencies and gaps. The empirical study follows a qualitative research design: an explanatory case study. The data were collected through observations of online lessons, interviews with teachers and the school principal, and students' reflections. In addition, an inductive thematic analysis was employed. The empirical results help to identify secondary school students' barriers to learning in terms of learning accessibility and technological literacy; planning and reflections on learning; self-regulated learning and active involvement; and emotional as well as psychological well-being. Furthermore, the study highlights how a school can minimise these barriers.

Keywords: Covid-19, barriers to learning, lower secondary school, students

1 *Corresponding Author. Educational Research Institute, Education Academy, Vytautas Magnus University, Lithuania; rasa.nedzinskaite-maciuniene@vdu.lt.
2 Educational Research Institute, Education Academy, Vytautas Magnus University, Lithuania.
3 Faculty of Humanities, Vytautas Magnus University, Lithuania.

V dobrem in slabem: ovire osnovnošolcev pri učenju med covidom-19

Rasa Nedzinskaite-Maciuniene, Egle Stasiunaitiene in Gerda Simiene

Na svetovni ravni je pandemija covida-19 prizadela celoten izobraževalni sistem, od predšolskega do visokošolskega izobraževanja. Brez kakršnih koli predhodnih priprav se je zgodil obsežen prehod učnega procesa z neposrednega učenja na učenje na daljavo. Ta je prinesel številne izzive. Namen članka je predstaviti, s katerimi ovirami pri učenju se spoprijemajo učenci višjih razredov osnovne šole in kako lahko šole te ovire čim bolj zmanjšajo. Sistematično smo pregledali znanstveno literaturo iz dveh znanih podatkovnih zbirk, EBSCO in ScienceDirect, da bi ugotovili in določili prevladujoče skladnosti in vrzeli. Empirična študija temelji na kvalitativnem raziskovalnem načrtu, tj. pojasnjevalni študiji primera. Podatki so bili zbrani z opazovanjem spletnih učnih ur, intervjuji z učitelji in ravnatelji šol ter z refleksijami učencev. Poleg tega je bila uporabljena induktivna tematska analiza. Empirični rezultati pomagajo opredeliti ovire osnovnošolcev pri učenju z vidika dostopnosti učenja in tehnološke pismenosti, načrtovanja in razmišljanja o učenju, samoregulativnega učenja in aktivnega vključevanja ter dobrega čustvenega in psihološkega počutja. Poleg tega raziskava poudarja, kako lahko šola te ovire čim bolj zmanjša.

Ključne besede: covid-19, ovire pri učenju, višji razredi osnovne šole, učenci

Introduction

The Covid-19 pandemic has affected all spheres of life. Globally, the field of education has faced unprecedented challenges. More than 1.5 billion learners worldwide have been affected by school closures (UNESCO, 2020). The teaching process unexpectedly and without any prior preparation has undergone a massive transition from face-to-face to distance learning. This posed several challenges: teacher adaptation to distance learning (König et al., 2020; Kruszewska et al., 2020); individual and institutional readiness to transition to distance education (Howard et al., 2020); students' capability to complete learning tasks independently (Lau & Lee, 2020); impact on student disengagement and early school-leaving rates (Espinosa Castro, 2020), and similar.

Moreover, as noted by the Human Rights Council of the United Nations (2020), under Covid-19 pandemic conditions 'students with disabilities are facing barriers on account of the absence of required equipment, access to the internet, accessible materials and support necessary to permit them to follow online school programmes. As a result, many students with disabilities are being left behind, particularly students with intellectual disabilities' (p. 6). However, there has been a lack of exploration in the scientific literature on how the pandemic has affected not only different sectors of education but also its different participants (teachers, students, parents, school principals, etc.).

Prior to the pandemic, students faced learning difficulties and barriers regardless of special educational needs (SEN). We perceive barriers to learning as difficulties that arise within the education system as a whole, the learning site and/or within learners themselves, which prevent access to learning and development (McManus et al., 2017). Learning barriers are faced not only by students with special educational needs but by all students (Booth & Ainscow, 2002). Sayed and Baker (2014) claim that potential learning barriers can be found in understanding, identifying the key points, processing information, comprehending the task, implementing the task, autonomous learning, and reporting on the task. According to Meyer et al. (2014), five groups of barriers to the learning process exist: in teaching methods, in learning goals, in materials, in assessments, and in context/learning environments. Scientific studies conducted prior to the Covid-19 pandemic reveal that barriers to learning are best mitigated by teachers' mentoring, supervision, support for students, and similar measures (Martinez et al., 2016; Wyness & Lang, 2016). Hence, the focus of the present article is on *how the pandemic has affected different students, what learning barriers they have faced, and how the school can help overcome these learning barriers*. In the following sections of the article, we first introduce the results of the systematic literature review

on scientific studies on barriers to learning at the lower secondary school level. Then, the research methodology is presented, which is an explanatory case study. Finally, the results of the research and a discussion are provided on the basis of the performed inductive thematic analysis.

Systematic literature review of distance learning under pandemic conditions

The Covid-19 pandemic has been a rapid and unexpected change that has affected educational systems worldwide. Thus, studies are emerging to analyse the impact of the pandemic on the education sector. Seeking to make an overview of the scientific research on how this unexpected change has affected education at the lower secondary school level, we conducted a systematic literature review based on a well-designed data search procedure (see the methodological part of this article). As a result, 232 articles were found, dating from the start of the pandemic (2019 to 2020). Among them, 10 articles were identified as relevant for this study (see Table 1). The following section provides a summary of these articles and their key findings.

The analysis of the articles reveals two main directions of research. One direction focuses on the learning conditions of students and the challenges experienced under pandemic conditions. For example, Pietro and Madonna (2020) emphasise the realities of educating students with special educational needs. Their research shows that distance learning affects academic abilities, leisure activities, weight gain, and other factors. The authors cite the use of various relaxation techniques (e.g., Jacobson's relaxation technique) to overcome the effects of distance learning as being extremely effective. Dube (2020) calls for attention to be paid to the existing learning conditions of students living in rural areas. The author notes that these students are excluded from the teaching and learning process due to technological issues. In addition, other authors claim that the transition of students to distance learning could be facilitated by the application of certain teaching strategies (e.g., Gameful instructions) (see Petefki & Rogers, 2020) and online teaching/learning tools (e.g., Moodle, EBA) (see Acar & Kayaoglu, 2020; Tanık-Önal & Önal, 2020), previous experience, and digital skills (see Bhaumik & Priyadarshini, 2020).

The second direction focuses on the teacher and the changed working conditions of the teacher. For instance, the scientific insights provided by Sari and Nayir (2020) demonstrate that teachers are not ready for the distance education process. Furthermore, the authors note that teachers lack both knowledge and practice in working remotely. Meanwhile, Midcalf and Boatwright

(2020) emphasise that teachers in the US had little time (between 24 and 72 hours) to prepare to teach entirely online. Naturally, such a sudden transition posed many challenges. Finally, Kaden (2020) draws attention to the changed workload of teachers, noting that teachers spend much of their time instructing students in real-time on Zoom, planning for instruction, and giving feedback.

Table 1

Papers related to distance learning at the lower secondary school level

Author(s) (year)	Country	Research strategy, method(s)	Participants	Research focus
Pietro, Madonna (2020)	Italy	Qualitative (interview)	Students (*N* = 20)	The effects of Covid-19 lockdowns on SEN students' transition to distance learning
Dube (2020)	South Africa	Qualitative (participatory action research)	Students (*N* = 10), teachers (*N* = 5)	Challenges faced by rural learners and enhancement of online learning in the context of the Covid-19 pandemic; social empowerment and inclusion of all learners
Acar, Kayaoglu (2020)	Turkey	Mixed (quasi-experiment)	Students (*N* = 44)	The use of Moodle as an online teaching/learning tool for EFL lessons and its effect on student achievement
Sari, Nayir (2020)	Turkey	Qualitative (interview)	Teachers (*N* = 65)	Distance education during Covid-19 and the challenges, such as lack of internet access and infrastructure, classroom management, human resources, etc., faced by teachers and students, and strategies to overcome them
Tanık-Önal, Önal (2020)	Turkey	Qualitative (interview)	Parents (*N* = 17)	Parents' views on learning science at home in the context of the Covid-19 pandemic
Bhaumik, Priyadarshini (2020)	India	Quantitative (questionnaire survey)	Students (*N* = 100)	E-readiness of senior school students for the transition to online learning in the context of Covid-19 and their views on this mode of learning
Petroski, Rogers (2020)	US (Connecticut State)	Qualitative (textual analysis)	Students (*N* = 122)	Impact of the transition to online learning through analysis of student emails and the choice of teaching approaches
Hosszu, Rughinis (2020)	Romania	Qualitative (discourse analysis)	Online articles (*N* = 152)*	Advantages and challenges of online and distance education experienced by teachers, students and civil society, focusing on the way online education reshaped social inequality
Kaden (2020)	US (Alaska)	Mixed (observation, interview, artefact, conversation)	Teacher (*N* = 1)	Covid-19 school closure-related changes to the professional life of secondary school teachers, including changes to workloads and support for learners
Midcalf, Boatwright (2020)	US (South Carolina)	Qualitative (questionnaire survey)	Teachers (*N* = 40), parents (*N* = 35)	Experience of teachers and parents during school closures in the period of the Covid-19 pandemic, which included teaching and learning challenges, student engagement and support systems

All the analysed articles emphasise the challenges faced by education participants in the transition to distance learning. Among the most commonly identified challenges encountered by teachers are an increase in their workload (see Kaden, 2020), lack of internet access (see Bhaumik & Priyadarshini, 2020; Sari & Nayir, 2020), poor infrastructure, difficulties in classroom management (see Sari & Nayir, 2020) and student engagement (see Midcalf & Boatwright, 2020), as well as provision of support to individual students (see Kaden, 2020). Furthermore, the challenges faced by students include the new mode of online learning (see Hosszu & Rughinis, 2020; Petroski & Rogers, 2020), unequal opportunities to quality distance education that arise due to a lack of internet access, low-tech applications (see Dube, 2020), exclusion of individual learners from the educational process, lack of motivation for learning (see Midcalf & Boatwright, 2020; Sari & Nayir, 2020), and similar factors.

It is noteworthy that three of the ten articles are from the United States; the same number of articles concentrating on Covid-19 issues comes from Turkey. Only one article explores the situation in an European Union country (Italy). The common findings (results identified by more than one article) reveal that: 1) the majority of the publications focus on the challenges that occurred due to the Covid-19 pandemic; 2) interview is the major research tool; 3) the most popular research topics include challenges faced by various education participants (teachers, students and their parents) as a result of the Covid-19 pandemic.

However, the above review also reveals the following research gaps: 1) most studies concern distance learning at secondary school and analyse the challenges faced from the perspective of one group of participants (i.e., only from parents', students' or teachers' perspectives); 2) the minority of articles provide possible ways or strategies for overcoming challenges caused by the Covid-19 pandemic. Hence, the present study seeks to fill a research gap concerning how schools are facing and responding to the pandemic.

Method

This study employs a qualitative approach through an explanatory case study (Yin, 2014). As Brown (2006) notes, this type of research is mainly used for unexplored areas and problems. An exploratory research approach is used to explore what barriers to learning students face during the Covid-19 pandemic and how the school can mitigate these barriers.

Participants

The case study research was performed, and field notes were taken in a Lithuanian lower secondary school located in the capital. The school provides primary (Grades 1-4) and lower secondary (Grades 5-8) education programmes. The school has 1,176 students in total.

The case study was conducted in the spring (2019/2020) and autumn (2020/2021) semesters. The study included one class of Grade 7-8 students, 27 students: 15 boys and 12 girls. All of them were aged 12–13. Based on information gathered from the school, there were two students with special educational needs (with hearing impairment (cochlear implant); specific learning (reading, writing) disorders). Three students had experienced physical, social and/or psychological trauma. Five students were classified as gifted, and four were less motivated to learn. The class is also has a heterogeneous ethnic background.

The study also involved two teachers (of English and of Lithuanian language and literature) and the school principal. All of them were females, aged 47 on average, with about 20 years of experience each. Both teachers hold master's degrees. The teachers were involved in the study to reveal how the teacher can minimise the barriers to learning faced by students. The school principal was invited to the study to reveal how the school could support students when teaching was affected by the pandemic.

Data collection

The data on which this paper is based were collected from several sources: observations ($N = 18$), interviews ($N = 3$) and reflections ($N = 15$). The data were collected from 1 April 2020 to 9 December 2020. The interviews with the teachers and the school principal allowed for a more accurate interpretation of the observation data. The developed observation tool was applied to observe the teacher-designed setting in the educational process. The teachers' reflections largely focused on their experience while organising distance teaching and focusing on the barriers faced by the students. Observation of the educational process and written reflections of students allowed us to identify the barriers to learning encountered by the students. The interviews with the teachers and the principal enabled us to identify how the teachers could minimise barriers to learning under Covid-19 conditions.

A systematic review of the academic literature was also conducted to identify the scientific studies on distance learning during the Covid-19 pandemic at the lower secondary school level (ISCED 2). The review included a search in the well-known databases *EBSCO* and *ScienceDirect*. The search terms were: 'online learning OR e-learning OR distance learning' AND 'Covid-19 OR

coronavirus OR 2019-ncov'. The main criteria for the search were full text, peer-reviewed research articles from scholarly journals, and written in the English language. The publication period ranged from 2019 to 2020 (November). A total of 232 papers were collected for the data screening process: 1) reading the title; 2) reading the abstract/summary; 3) reading the full article. After all the screening stages, the number of articles was reduced to 10 based on the exclusion criteria: 1) papers that focused on examining issues in fields other than education; 2) papers that focused on examining issues at education levels other than that of secondary school; 3) papers containing no empirical research; 4) duplicated articles that were extracted from different databases; 5) papers that did not analyse pandemic-driven challenges in education.

Data analysis

An inductive thematic analysis was employed for qualitative data analysis (Braun & Clarke, 2006). The thematic analysis was performed with the following stages: transcription, reading and familiarisation, coding, searching for themes, reviewing themes, defining and naming themes (Braun & Clarke, 2006). The data were analysed, and the findings were structured according to the main theme: *lower secondary school students' barriers to learning in the context of the* Covid-*19 pandemic.* The following sub-themes emerged from the analysis of the qualitative data: *learning accessibility and technological literacy*; *planning of learning and feedback*; *self-regulated learning and active involvement*; *emotional and psychological well-being*. The following section is a summary of the main findings from the case study.

Validity and reliability of the study

Validity and reliability in qualitative research are represented by trustworthiness (Korstjens & Moser, 2018). The trustworthiness of this study was established in several ways. To increase the credibility of the study, triangulation was employed. It was ensured through the inclusion of data from observation, interviews, and reflection.

All transcripts and written materials were examined carefully several times by two researchers separately. The thematic method provided steps to thoroughly identify, analyse, and summarise themes across the data set to find repeated patterns of meaning. In addition, the research team critically reviewed sub-theme schemes compiled by the researchers; comparative analysis was performed, and a unified approach was developed. In this way, the confirmability and dependability of this study were ensured.

Transferability is the last component of trustworthiness, which was attained by the fact that the very context of the pandemic provided preconditions for applying the research study findings to other contexts, circumstances, and situations.

Results

After the announcement of the lockdowns and the transition to distance learning due to the spread of the coronavirus SARS-CoV-2, the normal learning process, planning and styles of teacher and student work, as well as opportunities to overcome problems, changed. In Lithuania, distance learning was introduced very quickly, making students, teachers and parents adapt to this situation. However, new challenges created barriers to learning. Thus, the main topic of concern in the data analysis is *the barriers to learning that emerged during the Covid-19 pandemic*, which will be revealed in the context of four sub-themes.

Sub-theme 1: **Learning accessibility and technological literacy**

In distance education, problems related to the use of IT, internet connections, insufficient handling of equipment, and a lack of computer literacy skills are inevitable. This study helps identify students' learning barriers related to technology resources at schools and in families. During an interview, a teacher noted that some barriers to learning had been experienced by students growing up in large families:

> *'If there are two or three children in the family, they must have two or three computers, which should be in good condition, they must have good internet access; not all the internet connections can 'service' three computers. […] Obviously, the school provided tablets, but it turned out that the tablets could not normally support the google classroom, […] then the children took the tablets to the IT specialist's home, and he installed the programme for them. Then suddenly we realised that the headphones or the cameras were not working. Meanwhile, the school required both vision and sound. The children tried to work on the tablet and over the phone – two means of communication. The first phase [spring, the first phase of the covid pandemic] was a nightmare in the sense that everyone had to figure out technical issues and buy cameras. Definitely, half of the children didn't have cameras, because they didn't need them. [...] Now [autumn, the second phase of the covid pandemic] everyone is ready, there are only individual unprepared students, and often no problems arise' (Teacher A).*

Within a few months of moving from the first stage of the covid-19 pandemic-caused lockdown to the second, the problems of providing students and teachers with IT tools, choosing a virtual teaching platform, and remotely organising the educational process were solved in Lithuania. In addition, documents and recommendations were developed at the national and school levels. During the interview, the school principal claimed that the school itself carried out most work in improving the quality of distance education.

> *'School efforts and resources are absolutely an intellectual product of the school… video lessons were prepared [...] Emails were created for all students. […] We organised separate instructions for teachers; I taught the teachers myself. IT professionals then filmed the steps on how to use the system. Now everyone is doing their best without interruption. Parents and children are sent videos about logging in; families are equipped with IT equipment, class teachers are constantly connected and ask if students need any help. If problems arise, we try to solve them immediately' (the School Principal).*

Both teachers noted that it was easier to work and organise the teaching process during the second wave of the Covid-19 pandemic. The experience gained by the teachers and the readiness of the school facilitated these achievements. More attention was paid to aspects of lesson organisation and the use of technological opportunities rather than ensuring connections to the remote platforms.

> *'By the end of May, it was already clear to me how I would work and what I would do. And now, in the case of the second wave of covid, I do not feel any stress; I know everything; I try to take advantage of the technical possibilities to ensure that the text, sounds and images are available to the students. […] we learned together, the tool changed, it improved in the course of time, new functions emerged, there was communication among teachers, their needs were considered. The possibility to correct works, record results, and provide fast feedback appeared […] The children see all their assignments and assessments in one place, there is a possibility to create tests and surveys, the assignments are immediately corrected, so I don't need to correct them by hand, and I can do error analysis. I study the mistakes, and I plan how we'll work in the next lesson' […]. (Teacher A)*

> Speaking about the positive changes, the other teacher pointed out that *'Now the barrier associated with the system has been reduced, […] making the teaching run more smoothly. There are now fewer platforms; students*

can get information from videos, they learn how to use the system in information technology lessons' (Teacher G).

Thus, it is obvious that at the beginning of distance learning, students experienced barriers to accessing learning caused by difficulties in using information technologies and problems around internet connection. During the research, the problems associated with accessibility, transfer and reception of the educational content were identified. It is noteworthy that in a targeted response to the changes brought about by the epidemic, this barrier was minimised by the efforts of the entire school community.

Sub-theme 2: **Planning of learning and feedback**

In the pandemic situation, educational tasks were provided using technical means (computers/mobile phones/the internet), virtual learning environments, ICT tools (electronic record books, etc.), collaboration networks (email systems, social networks, websites, etc.), video conferencing tools, and others. Therefore, there were plenty of opportunities to convey information and communicate with the students. However, in one of the interviews, the teacher distinguished a

'challenge of how to explain very difficult topics remotely, how to offer kinaesthetic activities in lessons […] there is a great lack of time to lead lessons at a distance' (Teacher G).

During the interviews, it was determined that due to the lack of cooperation between teachers, the learning load of students was not optimally balanced. This also caused students' fatigue, inattention, changes in emotions, and long working hours at the computer. A teacher noted that

'[…] we, as teachers, do not weigh the amount of work [assigned to students]. A slower child does not process the information they have to process, master it and produce a result. If it includes all the school subjects, and if the child does not know how to plan the time, it becomes a problem' (Teacher A),

thus highlighting the problem of dealing with the volume of the learning content.

It is undisputed that communication and collaboration through the application and combination of learning methods are crucial in attracting and retaining students' attention, promoting their self-regulation through group learning, and motivating them to attain personal goals matching the goals of other group members (Wiliam, 2011). Following observations of the lessons

over a month, it was determined that the teachers tried applying traditional learning methods in the observed virtual lessons. The school principal noted, 'The use of methods has changed both in the classroom and in the virtual settings; student inclusion has also altered. The variety of educational methods has been narrowed and minimally applied by the teachers. The children are less involved; group work has decreased; the teachers are reluctant to organise pair or group work in distance learning as they are afraid of being unable to manage the process. While providing feedback, the teachers mainly restrict themselves to the written format as they cannot communicate live with every child.'

The role of a teacher is important in promoting learning in small groups. The focus is on how students can learn from their peers during small-group work, how teachers can prepare students for collaborative group work, as well as the role of teacher activity and classroom norms (Webb, 2010). In the case of distance learning communication, this is not a routine and easily organised activity. A teacher regretted, 'We cannot work in the usual ways: work in groups or pairs, because this system has no groups. And I miss it very much because language is a dialogue' (Teacher A). The other teacher emphasised that 'it is now difficult to use kinaesthetic activities. After moving to the virtual environment, they [students] generally lack movement. Vitality and vigour declined when they returned after the first lockdown' (Teacher G).

Students need to think about how to apply their knowledge and create new ideas. In this case, learning becomes constructive and self-regulating. Educational strategies must enable the student to construct knowledge, interpret it and relate it to other knowledge. It is important to know how to perform a task and how that task can be adapted to new situations (Chapman & Mitchell, 2020). During the interview, a teacher mentioned that in distance lessons, the students were less motivated to be involved in the lesson activities and used their creative powers moderately in performing the tasks.

> *'The class refuses any creative work. If they can only choose between a standard and creative task, they start feeling insecure. "I'd better write a few words" – and that's it. If they need to improvise, they leave their comfort zone and become afraid to be recorded. They don't want to be filmed, listen [to their recordings], or talk' (Teacher A).*

It is important to note that each conversation with students and their various performances is a response for the teacher about the students' knowledge and understanding and the effectiveness of the selected teaching methods (Kang & Keinonen, 2018). This information is an important basis for planning and individualising future teaching and learning activities.

> *'Now you have to come up with a way for communication to take place without the usual group work. I'm trying to apply the flipped classroom – it works out very well. The kids that need more time can do the tasks at home, at their own rhythm and pace. Some children just need to check every second word; others need to check only one. You then model the workload: ask the weaker students to answer one question, the excellent ones to answer three questions. This poses greater demands for the teacher to come up with the tasks, to choose the online materials to present to the students so that they can get involved in learning more actively' (Teacher A).*

Formal and informal verbal assessment is very important in motivating students. It is more difficult for a teacher to demonstrate support and provide feedback to students in a distance learning situation. Therefore, the emotion conveyed by the teacher is of great importance. In the observed lessons, the students received feedback on mistakes and aspects of learning to be corrected, yet the emotional content conveyed by the teachers was not as deep.

> *'Students get an answer quickly, here and now. The student sends me the work, and I get a message, then I note the mistakes and write comments and remarks. If they need revision, the students can find everything on the current topic. I mark the wrong place and send it back for them to correct' (Teacher A).*

It is noteworthy that during distance learning, the teachers were more likely to choose quick programmed feedback and written comments confirming what the student was doing correct and focused on improving the work. In the pedagogical process under analysis, the obvious activities of teachers were related to the identification of errors/knowledge gaps and the students' motivation to correct them.

Another problem associated with distance learning was the monitoring of students' individual progress. 'Teachers cannot guarantee children's fair work in the classroom. Tests take place online. The teacher does not see what the child is doing, if he/she has any additional gadgets, or if someone tells them the correct answers,' noted the school principal.

After discussing the content of this sub-theme, it should be noted that the students encountered barriers to adapting to the changes in the organisation of the curriculum. 'Learning behind the screen' in the home environment leads to insufficient involvement of the students in the educational process and reduces their motivation to participate, collaborate and create actively while performing the tasks. However, distance learning allowed for quick and

objective feedback from the teachers and encouraged the students to monitor their learning progress purposefully. However, students received less verbal formative assessment as a means of supporting their learning process.

Sub-theme 3: **From self-regulatory learning to active involvement**

Independent and self-directed learning is directly linked to student development. Independent work and learning build self-confidence (Chen, 2020). This develops the student into a motivated and individually experimenting student. One of the positive sides of independent learning is the students' ability to work on their own with confidence and minimal guidance. Distance learning creates preconditions for autonomy in the learning process and gives students greater opportunities to plan and manage their learning (Liman & Tepeli, 2019).

Nevertheless, these circumstances cannot always be treated as positive. The interview data revealed that some students experienced difficulties planning their time for independent learning while distance learning. A teacher noted, 'The students work differently on their own. They sit at home; they can go and eat any time; after they have eaten, the lesson is over, and the work has not been done yet. […] They are unable to plan their time; if they are slower and no one helps them to follow the pace, they develop no skills to learn on their own. The problem is that they spend time meant for self-study doing something else or fail to learn and do the work on time' (Teacher A).

Another aspect identified as a barrier to learning was the assurance of a work and rest balance. A long period of learning at computers, decreased activeness, reduced time in the fresh air, and a lack of a consistent schedule affect the balance of work and rest periods for students, which leads to difficulties in independent learning. The teacher claimed in frustration:

> *'The children just work violating the normal standards studying. They have lost the sense of time: they reply to my letters at eleven at night [...] but what can I do if they choose that style of working themselves... It is their own [students and their families] decision to be constantly online. (Teacher G).*

The school principal distinguished problems related to the education of children with special educational needs.

> *'Most students do not like contactless learning, and it is difficult for them to learn 'through the screen'. Such a mode of learning is suitable for individual children only. The majority try to connect and work with assistants. The teacher assistants receive assignments from the subject teachers, schedule their time and work with these students' (School Principal).*

The study identified teacher efforts to motivate students to set learning goals for themselves and to achieve better outcomes. The teacher mentioned using *Liveworksheets* in the educational process, which are online exercises designed according to the student's level.

> *'I use virtual task sets, where children can check if they have done well while working. Seeing their errors, they can correct themselves multiple times. It helps to strengthen their self-motivation for learning. I can track their progress and see how stronger students work up to get a ten [a ten-point assessment scale is used in Lithuania], whereas weaker ones do the tasks and send them even with mistakes […] Distance [learning] enables children to assume responsibility for their own results and do as much as they want…' (Teacher A).*

After completing the task, the students could review their work, the errors were marked automatically, and thus, they could redo the task as long as they achieved the desired result. Afterwards, they had to send it to the teacher for final evaluation. One of the students commented,

> *'While learning, I really like to complete those Liveworksheets because you can do them and find out what you did wrong. I also like watching videos and discussing them later' (Student G).*

It is noteworthy that the more independent students are, the easier it is for them to set learning goals, make decisions, identify their learning needs, take responsibility for developing and implementing their own learning, monitor their progress towards their learning goals, as well as self-assess their learning outcomes.

However, in the interview, a teacher maintained that the students reflected less and avoided giving their opinion.

> *'We have a communication "window" in which I ask them to vote, record, and express their opinions, raise their hand […], they do not reflect; there is no such habit. During the lesson, I ask them to send me a short reflection, and it happens that some of them do not send it at all' (Teacher A).*

Reflection allows understanding the direction of one's progress in learning. By ignoring this stage of learning, the opportunity to personally reflect on and verbalise learning gaps and difficulties is decreased (Hall & Simeral, 2017). As a result, it is more difficult to learn in a motivated and purposeful way and get actively involved in the learning process. The barrier to student involvement in the learning process is determined by the transformation of communication

with students and teachers from direct social interaction-based communication to communication through a 'flat-screen mediator'. During such communication, there is much 'side noise' and other factors that limit the purposefulness of self-regulated learning. They include invisibility behind the screen, opportunities to use the phone or to play, and similar factors. As a result, the student's responsibilities towards the teacher, other students, and their own participation in the learning activities are lost. This means that the home environment turns into a limited educational environment.

Sub-theme 4: **Emotional and psychological well-being**

The difficult situation of the pandemic revealed that distance learning should still involve human relationships, community, emotional health and well-being. However, in distance learning, the need for social communication and group communication, especially relevant for students, remains an acute barrier to learning.

> *'The lack of social contact is felt very much. Everyone expected the second stage to last just a couple of weeks. But when they passed, and the lockdown was extended, all the students I work with said, "We want to learn live; we want to sit down and chat." They can stay in the system to talk, but that's not real. Communication is narrowed to a flat screen. This is definitely a problem for them' (School Principal).*

Restricted social relationships lead to a significant reduction in the influence of the peer group as a social network. After losing these direct socio-emotional relationships, students encounter learning barriers related to the changes and disorders in emotional and psychological states.

> *'Now there really are children who need psychological help. Some have become even more closed: if some of them joined the lessons at the beginning of the pandemic, they stopped in about the sixth week. They are emotionally vulnerable, and psychological help is provided [by the school psychologist], yet that is not enough. They are often distanced from everything' (the School Principal).*

During the interview, the teacher distinguished existential anxiety and a fear of falling ill. An adult and more experienced person can more easily understand and verbalise the emotions associated with the complex pandemic situation. However, in students, they are not always recognisable and expressed.

> *'Two students brought covid from the sports club. It's good that no one got infected, thank God – nobody got infected! I was de facto isolated <...>. I*

> *discovered that I isolated myself too late. So, we experienced a bit of existential anxiety. Although the children did not say that, I think they were also a little shocked that they could have fallen ill' (Teacher G).*

Students are often afraid to try new and challenge-based ways of learning offered by teachers. Students must go beyond their personal comfort zones. The teacher noted that

> *'[…] less capable children are afraid to ask. In the real lessons, you would come close, talk, and answer the question in person. Everything here is like on stage; the children don't even write in the chat. So, I suggest that when we stay in a group with a few students, we will discuss the issues that are important to them' (Teacher A).*

The study revealed teacher support for students to ensure a safer and supportive relationship. The efforts of the teachers to motivate students to establish and maintain a safe and adequate relationship with the environment, not to be afraid of environmental pressures, were observed.

Not all the circumstances in the distance learning process are conducive to achieving what has been planned. However, it is obvious that in the distance learning process, the students faced situations when the help of another person was needed. The following excerpt from a distance learning lesson reveals teacher and class support for the student during an online English lesson:

> *Student M: 'Oh, I can't turn it on my camera keeps turning off.' The student is reading what he has written, with a lot of difficulty and numerous pauses, frequently mispronouncing. The teacher is listening. The student: 'How is "meduolis" [gingerbread] in English?' The teacher tells him. The teacher asks the student in English what the end of his story is. He answers nothing and keeps silent for a long time. [it is unclear whether he did not understand what the teacher was asking or disconnected]. Student M joins again and says in Lithuanian: 'My phone is discharged. I will tell you the end soon'. He fumbles for a long time, sighs, and finally starts reading. The teacher helps him by asking questions in English* (from lesson observation).

This episode demonstrates how the student-teacher interaction reveals a relationship based on trust: the student felt safe to make mistakes and ask questions; the teacher was benevolent and helpful during the student's performance. Student-student interactions also disclosed generous and sincere support from the group to the student who found it more difficult to present his work.

The study also highlighted cases of successful adaptation of SEN students to distance learning, which was partly due to the sense of emotional and psychological security. For example, the teacher noted that distance learning developed the students' sense of self-confidence.

> '*Student N [a student with special education needs] actively participates in the lesson. Although he does not know the answer, he does not hear other students' remarks and feels more encouraged. I would say his emotional state is different when he doesn't hear other students. It seems to me the screen gives a sense of security: if you ask them, they have time to arrange their thoughts before they turn the sound on. The children see everyone's faces, and you see their emotions, that's an advantage' (Teacher A).*

It appeared that class and other teachers had to allot much attention while ensuring a positive relationship with parents, identifying the students' emotional-psychological problems, and searching for ways to support the students. The school principal stated

> *'The class teachers monitor the teachers' comments, call parents and ask what has happened so that the child does not join the lesson. Parents claim that the children need psychological help. We respond to their claims: we contact the school psychologist, and she provides help to the students' (the School Principal).*

During the research, it was determined that the unusual distance learning situation caused emotional stress or exacerbated psychological problems for some students. Some students became more emotionally vulnerable, especially if they did not receive caring and sensitive support from their families. Others found it more difficult to participate adequately in the learning process or set or follow their own rules for engaging in a lesson, doing homework, or following daily routines.

Discussion and Conclusions

The purpose of this study was to examine the barriers to learning caused by COVID-19 at the lower secondary school level. Moreover, attempts were made to reveal how these barriers could be minimised by the school. The main theme, *lower secondary school students' barriers to learning in the context of the COVID-19 pandemic,* was concretised in the following sub-themes that emerged from the research data*: learning accessibility and technological literacy; planning of learning and feedback; self-regulated learning and active involvement;*

emotional and psychological well-being. The study revealed important context-related barriers to learning and the school's performance in overcoming them under lockdown conditions.

Firstly, the study's findings confirmed the findings of other researchers (Bhaumik & Priyadarshini, 2020; Dube, 2020; Sari & Nayir, 2020) that a major obstacle to distance learning under lockdown conditions is a lack of IT devices and insufficient IT skills. The case study revealed that the transmission of the curriculum and lack of IT skills of both students and teachers created a barrier to learning. High-quality use of information technologies leads to consistency of the educational process organisation and avoids content delivery and information reception problems. However, it is important to note that in the case of Lithuania, unlike in other countries (e.g., South Africa, Turkey, India), internet access is not itself a barrier.

Secondly, the study revealed the students' insufficient involvement in the educational process, their loss of interest and motivation, and their unwillingness to participate and cooperate actively in performing the tasks. Saphier et al. (2008) note that students' self-motivation to continue their activities in the face of challenges is an important part of self-regulated learning. In the present research, it was also identified that during distance learning, the students who participated in the study had few opportunities to work in groups, and to discuss and express their opinions, chose the usual, and therefore acceptable learning methods. These results align with other study results on the Covid-19 pandemic and distance learning (e.g., Ebner & Gegenfurtner, 2019). Furthermore, the authors note that students were less engaged in learning during the lockdown. Furthermore, when student involvement in the educational process decreases, it becomes more difficult to identify their understanding of the covered material and the effectiveness of the selected teaching methods. Therefore, it is important to look for strategies and ways to ensure student engagement and active participation in distance learning.

Thirdly and most importantly, the studies accomplished by other researchers reveal that the pandemic and lockdowns caused mental and socio-emotional problems (Bhaumik & Priyadarshini, 2020; Elmer et al., 2020;). In this study, it was also noted that students' emotional and psychological health deteriorated: the students became more closed, sensitive, and vulnerable while learning remotely. Meanwhile, for the students prone to psychological problems, these only intensified and became more pronounced during the pandemic and lockdowns. Thus, it is important to focus not only on ensuring the learning and knowledge acquisition processes of learners but also on maintaining and strengthening their mental health.

Last but not least, there is still a lack of research analysing how the Covid-19 pandemic and lockdowns have affected various areas of education and its participants. Existing research is focused on a single level of education or participants. Meanwhile, studies on how the pandemic and lockdowns have affected the entire education system are insufficient (Harris & Jones, 2020). Furthermore, we believe that no guidelines or strategies for operating in a pandemic environment exist. In the case of our research, the following school strategies for minimising barriers to learning were highlighted: technical (supply of IT tools; preparation of video material on how to work/learn remotely); pedagogical (application of various tools (e.g., liveworksheets); provision of timely feedback); managerial (creation of a timely student support system; positive and frequent communication with parents; establishment of an IT specialist-consultant position), etc. Similar tools to address the challenges posed by the pandemic and lockdowns have been used or proposed by other researchers. For instance, Dube (2020) places a particular emphasis on providing devices for both teachers and learners to enable rural students to engage in an online learning process, whereas Bhaumik and Priyadarshini (2020) highlight the importance of 'hardware support' for all participants in the educational process. Similarly, Sari and Nayir (2020) propose to reduce the workload of teachers and students by introducing digital learning platforms, supporting the learning process with e-books, v-blocks and social media. Furthermore, such teaching/learning methods as case studies, discussions, experimental learning, brainstorming sessions, and games can be employed to make lessons more efficient and effective in a pandemic context.

One of the limitations of the present research is its locality (i.e., the case of one school). Moreover, some conclusions and insights (e.g., concerning the barriers to learning that emerge due to students' emotional well-being) are primary and require more in-depth research. However, as mentioned before, no universal formulas to ensure operational efficiency in the pandemic environment exist. Furthermore, the handling of the pandemic itself is contextual. Thus, the study's findings may be relevant to other secondary schools facing similar barriers to learning. The findings of this case study also provide guidelines for further studies. Future studies could focus on a systemic approach to eliminating barriers to learning caused by the pandemic, which could provide greater insights into how to deal with barriers to learning caused by unexpected and rapid changes in education.

References

Acar, A., & Kayaoglu, M. N. (2020). MOODLE as a potential tool for language education under the shadow of Covid-19. *Eurasian Journal of Educational Research, 90*, 67–82. https://doi.org/10.14689/ejer.2020.90.4

Bhaumik, R., & Priyadarshini, A. (2020). E-readiness of senior secondary school learners to online learning transition amid Covid -19 lockdown. *Asian Journal of Distance Education*, *15*(1), 244–256.

Booth, T., & Ainscow, M. (2002). *Index for inclusion: Developing learning and participation in schools.* Centre for Studies on Inclusive Education (CSIE).

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77–101.

Brown, R. B. (2006). *Doing your dissertation in business and management: The reality of research and writing*. Sage Publications.

Chapman, S., & Mitchell, M. (2020). Momentum for math: Help students become active learning partners in online classrooms. *Learning Professional, 41*(3), 30–34.

Chen, I. (2020). Correlation between self-efficacy and English performance. *Journal of Emerging Technologies in Learning, 15*(8), 223–234.

Dube, B. (2020). Rural online learning in the context of Covid -19 in South Africa: Evoking an inclusive education approach. *Multidisciplinary Journal of Educational Research, 10*(2), 135–157. https://doi.org/10.4471/remie.2020.5607

Ebner, C., & Gegenfurtner, A. (2019). Learning and satisfaction in webinar, online, and face-to-face instruction: A meta-analysis. *Frontiers in Education, 4*, 92, 1–19.

Elmer, T., Mepham, K., & Stadtfeld, C. (2020). Students under lockdown: Comparisons of students' social networks and mental health before and during the Covid -19 crisis in Switzerland. *PLoS ONE 15*(7), 1–22. https://doi.org/10.1371/journal.pone.0236337

Espinosa Castro, T. (2020). Covid -19 and risks for disadvantaged students: a media coverage analysis from a cultural psychology perspective. *Intercultural Education*, 1–10. https://doi.org/10.1080/14675986.2020.1800922

Harris, H., & Jones, M. (2020). Covid-19 – school leadership in disruptive times. *School Leadership & Management*, *40*(4), 243–247. https://doi.org/10.1080/13632434.2020.1811479

Hosszu, A., & Rughiniș, C. (2020). Digital divides in education. An analysis of the Romanian public discourse on distance and online education during the Covid-19 pandemic. *Sociologie Românească*, *18*(2), 11–39. https://doi.org/10.33788/sr.18.2.1

Hall, P. A., & Simeral, A. (2017). *Creating a culture of reflective practice: Building capacity for schoolwide success*. ASCD

Howard, S. K., Tondeur, J., Siddiq, F., & Scherer, R. (2020). Ready, set, go! Profiling teachers' readiness for online teaching in secondary education. *Technology, Pedagogy and Education*, *3*(1), 141–158. https://doi.org/10.1080/1475939X.2020.1839543

Yin, R. K. (2014). Case study research design and methods (5th ed.). Sage.

Kaden, U. (2020). Covid-19 school closure-related changes to the professional life of a K–12 teacher. *Education Sciences*, *10*(6), 165. https://doi.org/10.3390/educsci10060165

Kang, J., & Keinonen, T. (2018). The effect of student-centered approaches on students' interest and achievement in science: Relevant topic-based, open and guided inquiry based, and discussion-based approaches. *Research in Science Education, 48*, 865–885.

König, J., Jäger-Biela, D. J., & Glutsch, N. (2020). Adapting to online teaching during Covid -19 school closure: Teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education*, *43*(4), 608–622. https://doi.org/10.1080/02619768.2020.1809650

Korstjens, I., & Moser, A. (2018) Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice, 24*(1), 120–124. https://doi10.1080/13814788.2017.1375092

Kruszewska, A., Nazaruk, S., & Szewczyk, K. (2020). Polish teachers of early education in the face of distance learning during the Covid -19 pandemic – the difficulties experienced and suggestions for the future. *Education, 3*(13), 1–12. https://doi.org/10.1080/03004279.2020.1849346

Lau, E. Y. H., & Lee, K. (2020). Parents' views on young children's distance learning and screen time during Covid -19 class suspension in Hong Kong. *Early Education and Development*, *32*(6), 863–880. https://doi.org/10.1080/10409289.2020.1843925

Liman, B., & Tepeli, K. (2019). A study on the effects of self-regulation skills education program on self-regulation skills of six-year-old children. *Educational Research and Reviews, 14*(18), 647–654. https://doi.org/10.5897/ERR2019.3853

Martinez, A., Mcmahon, S. D., Coker, C., & Keys, C. B. (2016). Teacher behavioral practices: Relations to student risk behaviors, learning barriers, and school climate. *Psychology in the Schools, 53*(8), 817–830.

McManus, D., Dryer, R., & Henning, M. (2017). Barriers to learning online experienced by students with a mental health disability. *Distance Education, 38*(3), 336–352.

Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. CAST.

Midcalf, L., & Boatwright, P. (2020). Teacher and parent perspectives of the online learning environment due to Covid-19. *The Delta Kappa Gamma Bulletin: International Journal for Professional Educators*, *87*(1), 24–34.

Petroski, D. J., & Rogers, D. (2020). An examination of student responses to a suddenly online learning environment: What we can learn from gameful instructional approaches. *The Journal of Literacy and Technology*, Special Issue, 102–129.

Pietro, M., & Madonna, G. (2020). Difficult inclusion and physical activity for distance didactics. *Journal of Physical Education and Sport, 20*(4), 2386–2391. https://doi.org/10.7752/jpes.2020.s4325

Sayed, M., & Baker, F. (2014). Blended learning barriers: An investigation, exposition and solutions. *Journal of Education and Practice, 5*(6), 81–85.

Saphier, J., Haley-Speca, M. A., & Gower, R. (2008). *The skillful teacher: Building your teaching skills* 6th Ed.). Research for Better Teaching, Inc., Acton, 5.

Sari, T., & Nayir, F. (2020). Challenges in distance education during the (covid-19) pandemic period. *Qualitative Research in Education*, *9*(3), 328–360.

Tanık-Önal, N., & Önal, N. (2020). Teaching science through distance education during the covid-19 pandemic. *International Online Journal of Education and Teaching*, *7*(4), 1898–1911.

United Nations Educational Scientific and Cultural Organization. (2020). *COVID-19 impact on education*. https://en.unesco.org/covid19/educationresponse

United Nations Human Rights (2020). Covid-*19 and the rights of persons with disabilities: Guidance*. https://www.ohchr.org/Documents/Issues/Disability/COVID-19_and_The_Rights_of_Persons_with_Disabilities.pdf

Wyness, M., & Lang, P. (2016). The social and emotional dimensions of schooling: A case study in challenging the 'barriers to learning'. *British Educational Research Journal, 42*(6), 1041–1055 https://doi.org/10.1002/berj.3245

Webb, N. M. (2010). Peer learning in the classroom. In *International Encyclopedia of Education* (3rd ed.). Elsevier.

Wiliam, D. (2011). *Embedded formative assessment*. Solution Tree.

Biographical note

Rasa Nedzinskaite-Maciuniene, PhD, is an associated professor in the field of educational sciences on the Academy of Education at Vytautas Magnus University, Lithuania. She is also a senior researcher at the Educational Research Institute (Vytautas Magnus University). Her main areas of research are: teacher education, teacher professionalism, educational leadership, i.e. leadership for effectiveness of education system and leading through rapid and unexpected changes.

Egle Stasiunaitiene, PhD, is an associated professor in the field of educational sciences on the Academy of Education at Vytautas Magnus University, Lithuania. Her main areas of research are: inclusive education, vocational training of teachers, assessment and recognition of non-formal and informal learning achievements. Researcher is the co-author of 4 monographs, 12 methodical editions and 16 scientific articles. She is the member of General Education Council under the Ministry of Education and Sport, Lithuania.

Gerda Simiene, PhD, is an assistant professor in the field of English language didactics on the Faculty of Humanities at Vytautas Magnus University, Lithuania. Her field of scientific interests covers foreign language teaching methodology, intercultural studies, personalised learning, inclusive pedagogy, Universal Design for Learning, and its implementation in language lessons, as well as foreign language teacher training.

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Distance Learning under the Covid-19 Conditions within Architectural Education

Emel Unver*[1] and Asli Sungur[2]

Distance learning is one of the means of education used in various levels, from primary school to college. However, distance learning in architectural education differs from other disciplines, as architectural education is design-based with predominantly applied courses. As the spring semester of the 2019/20 academic year had to continue online due to the Covid-19 pandemic and it remained uncertain whether or when face-to-face (FtF) education will start till the end of the term, the necessity to focus on online education suddenly raised in architectural faculties.

This study aims to start a discussion on how to proceed with online architectural education, focusing on quality, defining the fundamentals, and proposing suggestions within this scope. In order to achieve this aim, research on the evaluation of the existing distance learning platforms of universities, the differences between the implementations of theoretical and applied courses, the advantages and disadvantages of the process are made. For this purpose, a comprehensive literature review on universities that provide fully online, hybrid and conventional (FtF) education throughout the world is conducted, given and discussed in the paper. After the research on ongoing processes, a case study to determine the experiences, opinions and approaches of students and academic staff with the scope of emergency remote teaching is designed and conducted. Together with the findings of the review and the case study, the challenges, strengths and opportunities of online architectural education are discussed and evaluated with a focus on maintaining and raising the quality of the education. In conclusion, suggestions and proposals are made and presented to be applied and developed in architecture faculties' future online education experiences.

Keywords: Covid-19, distance education, architectural education, emergency remote teaching

1 *Corresponding Author. Faculty of Engineering and Architecture, Beykent University, Turkey; emelunver@beykent.edu.tr.

2 Yildiz Technical University, Turkey.

Učenje na daljavo v arhitekturnem izobraževanju med covidom-19

Emel Unver in Asli Sungur

Učenje na daljavo je eden izmed načinov izobraževanja, ki se uporablja na različnih ravneh, od osnovne šole do fakultete. Učenje na daljavo v arhitekturnem izobraževanju pa razlikuje od drugih disciplin, saj temelji na oblikovanju s pretežno praktičnimi predmeti. Ker se je moral pomladni semester študijskega leta 2019/20 zaradi pandemije covida-19 nadaljevati na daljavo in je bilo do konca semestra negotovo, ali in kdaj se bo začelo konvencionalno izobraževanje oz. izobraževanje na fakulteti (Face-to-Face), se je na fakultetah za arhitekturo nenadoma pojavila potreba po osredinjanju na izobraževanje na daljavo. Namen raziskave je začeti razpravo o tem, kako nadaljevati spletno arhitekturno izobraževanje, s poudarkom na kakovosti, opredeliti temelje in oblikovati predloge v tem okviru. Da bi dosegli ta cilj, so bile izvedene raziskave o vrednotenju obstoječih univerzitetnih platform za učenje na daljavo, razlikah med izvedbami teoretičnih in praktičnih predmetov ter o prednostih in slabostih postopka. V ta namen je bil v prispevku opravljen obsežen pregled literature o univerzah, ki izvajajo popolnoma spletno, hibridno in konvencionalno (Face-to-Face) izobraževanje po vsem svetu. Po raziskavi procesov v teku je bila zasnovana in izvedena študija primera, da bi ugotovili izkušnje, pristope ter mnenja študentov in akademskega osebja o obsegu poučevanja na daljavo v izrednih razmerah. Skupaj z ugotovitvami pregleda in študije primera so bili obravnavani in ovrednoteni izzivi, prednosti in priložnosti arhitekturnega izobraževanja na daljavo s poudarkom na ohranjanju in dvigu kakovosti izobraževanja. V sklepu so podani predlogi, ki bi jih lahko uporabili in razvili v prihodnjih izkušnjah izobraževanja na daljavo na fakultetah za arhitekturo.

Ključne besede: covid-19, izobraževanje na daljavo, arhitekturno izobraževanje, poučevanje na daljavo v izrednih razmerah

Introduction

Education has experienced a transformation with the impact of globalisation and technological developments. Distance learning, which has two types, synchronous and asynchronous, came into our lives due to the computer age, the value of time, the marketing of products and the availability of online services. Although asynchronous distance learning has been available since the 1700s, synchronous distance learning began with the integration of web-based systems into our lives.

In addition to this, distance learning programs in various disciplines are available in the curricula of many universities. However, distance learning in architectural education is always challenging because architectural education is design-based with predominantly applied courses and a master-apprentice relationship is the foundation of architectural education.

Spreading from Wuhan, China, in December 2019, Covid-19 quickly became a pandemic; it is affecting the whole world, dragging us towards a new world order. As a part of measures taken against Covid-19, the spring semester of the 2019/20 academic year in all levels had to be continued online in Turkey, as in many other countries.

In this context, this study aims to start a discussion on how to conduct online architectural education, focusing on quality, defining the fundamentals, and proposing suggestions within this scope.

Distance Learning and Covid-19

Distance learning occurs when students and instructors are physically separated. The history of the concept of distance education goes back to the 1700s. A newspaper advertisement about stenography, issued by Caleb Phillips on 20 March 1728, has been cited as the first example of distance learning (Erthal & Harting, 2005). Although it is unclear whether this course was actually given, it is known that the students and the instructors reached out to each other and students were graded. According to the official sources, the acceptance as the first distance learning was a correspondence stenography course that Isaac Pitman gave in 1840. Subsequent correspondence courses were in Germany in 1856, the US in 1877, Sweden in 1889, Australia in 1910, New Zealand in 1922, Poland in 1966 and Spain in 1972 (Kaya, 2002).

In Turkey, even though some proposals about distance learning had been presented by the National Education Council in the 1920s, the first concrete step, the Correspondence Courses Centre to teach vocational and technical

education, a body of the Ministry of National Education, took place in 1961. The first permanent and regular implementation of distance learning was the 'School of Open Education', established in 1983, within the body of Anadolu University (Celik, 2017).

Today, distance learning is given in two ways as synchronous and asynchronous. In asynchronous distance learning, there is no time limit because the students and instructors do not have to be available simultaneously. Instead, the students take the courses through alternative materials such as e-mails and open courseware. These materials provide a model for accessible communication. The synchronous learning environment is structured in the sense that students attend live lectures, and there are real-time interactions between educators and learners (Dhawan, 2020).

Covid-19 spread out from Wuhan, China in December 2019 and was declared a pandemic on 11 March 2020 by the World Health Organization. The Turkish government took measures against Covid-19, such as closing educational institutions and switching the education system from face-to-face (FtF) to online, as in many other countries. In public primary, middle, and high schools, education continued through the digital education platform of the Ministry of National Education, both online and featured on the state's official TV channels. Private schools mostly used their own infrastructure and distance learning platforms for online education. Universities made the transition to distance education quickly and extemporaneously by using their existing distance learning platforms. Thus, distance learning, which had been predicted for the coming decades, occurred in a few weeks instead.

This situation happened to be the same nearly for all students and instructors. However, students who have different conditions perceived and experienced this situation differently. Distance learning has some advantages and disadvantages for students with various disabilities. Before the pandemic, some models supported equal opportunities in education. The Universal Design for Learning, which originates from North Carolina State University, is an example of this subject. It is a way of thinking about teaching and learning that helps give all students an equal opportunity to succeed. It is based on three main principles (Morin, 2014).

Representation: offering information in more than one format. Providing not only textbooks but also video, audio and hands-on learning.

Action and expression: giving the students more than one way to interact with the material and show what they have learned. For example, students might get to choose between taking a pencil-and-paper test or giving an oral presentation.

Engagement: Universal Design for Learning encourages teachers to look for multiple ways to motivate students. Letting the students make choices and giving them assignments.

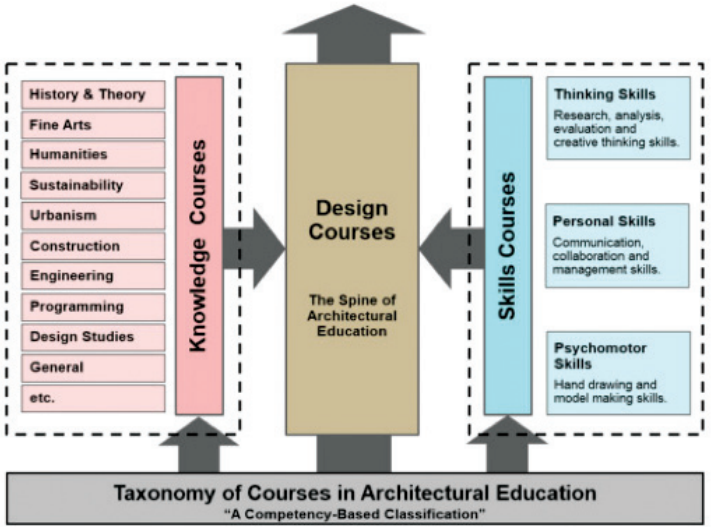
Universal Design for Learning principles focus on the design of flexible, inclusive and student-centred educational environments to ensure that all students have access to and benefit from course materials, activities and assignments. In parallel with the Universal Design for Learning principles, the Council of Higher Education in Turkey stated that 'small changes have big meanings' and made a recommendation to universities on 7 May 2020 to address the problems and experiences of students with disabilities. In this context, it was recommended to give courses with captions for hearing-impaired students and to use large fonts and high-contrast colours in presentations, describing visual contents, graphics and tables during the lessons for visually impaired students (Council of Higher Education, 2020). However, it can easily be said that distance architectural education for students with different conditions requires a more detailed and complicated study and arrangement.

The General Framework of Architectural Education

Architectural education differs from other disciplines as it is design-based with predominantly applied courses. Design studios are the main classes for teaching design skills to future architects (Tekeli, 2014). Architectural education is a process that has design studios at its centre, supported by compulsory courses and a wide range of elective courses, ending with a thesis project and professional practice (see Figure 1).

Figure 1

Courses in architectural education



Note. Adapted from Eweda & Gonim, 2018.

In addition to the courses taken in the university, seminars, workshops, social and cultural activities, and site visits are an important part of architectural education. As mentioned, 'The architect should be equipped with the knowledge of different disciplines and various teachings' in the Ten Books of Architecture, written by the Roman architect Vitruvius (90–20 BC). Hence, architectural education has been and remains supported by other disciplines, and theoretical and social aspects exist within them. Students and instructors are in a one-on-one relationship in architectural education, and the instructor examines each project. As a result, architectural education is beyond the FtF education by nature, unlike many other disciplines. The one-on-one relationship between student and instructor is a reflection of a traditional master-apprentice relationship.

Traditional Design Studios

The concept of the design studio is based on the French Royal Academy and continued with the Ecole des Beaux-Arts (Bender & Vredevoogd, 2006). It became traditional for schools to have the studio as the centre of the curriculum. Design studios, where drawing, modelling, debate, and design analysis

take place, are considered more of an active learning experience than a lecture-style classroom (see Figure 2).

Figure 2
Traditional design studios

Note. Sungur archive.

In traditional design studios, there are 12 to 24 students per instructor, depending on the department's capacity. On certain days of the week, students show their projects individually to the instructor and continue their studies according to the critique given. Traditional design studios provide a working environment for students where they generally remain passive, take notes, listen and work on their projects in line with the critiques (Sagun et al., 2008). It is common for students to wait all day while listening to the critiques given to the other students to receive feedback from the instructor regarding their project. Traditional design studios are necessary for not only the student-instructor relationship but also student-student relationships.

The design jury, which is an open discussion platform taking place once or twice during the semester and once at the end of each semester, continues to evaluate the students' projects throughout the day. Listening to the project comments of each other is a valuable asset for architectural education.

Compulsory and Elective Courses

In architectural education, design studios benefit from compulsory and elective courses. Compulsory courses, which can either be theoretical or applied, are grouped as Building Design and Theory, Building Science and Technology, Restoration and History of Architecture (This grouping is given as an example from Yildiz Technical University in Istanbul). These courses can be considered a contribution to the design studios to provide the rudiments of design to the students.

In addition to compulsory courses, there are elective courses to complement competence. Students can take either area electives or non-area electives to improve themselves culturally, socially and technically. There is a high variety of elective courses as architectural education benefits from many other disciplines. In addition, students support their competencies with elective courses and various activities (panels, film screenings, architectural talks etc.).

Graduation Project

The graduation project is a way to showcase the knowledge and the skills gained during the educational lives of students. During the graduation project, students work independently throughout the semester and do not actively see the instructor for revisions, as in previous semesters; however, some interviews and design juries are held during the semester. The student is expected to work completely individually and afterwards make a presentation of the project. The students' projects are evaluated by the faculty staff and professionals, most of whom are acquainted with project competitions. This jury makes the final decision about whether the creator of the graduation project should be repeated for another term or should successfully graduate from the faculty.

Internship

Internships are required to enhance the knowledge and skills gained in theoretical and applied courses in an architecture program. The aim of an internship is to gain knowledge, ability and experience in office work and construction sites, as well as in interdisciplinary areas related to architecture, such as research, archaeological excavations, restoration and documentation works, and similar. (Yildiz Technical University, 2020). The internship, which has two types (i.e., at either an office or a construction site) is a requirement of graduation in many architecture faculties throughout the world.

While the student experiences being responsible for the project from the design phase to application in the office internship, the construction internship contributes to three-dimensional thinking and enhances the collaboration with other disciplines.

Distance Learning in Architectural Education

Distance learning in architectural education comes as a challenge because of the structure of architectural education. The first virtual design studio studies date back to the 1960s at the University of Illinois (Bitzer, 1986). Other examples of distant learning include college-by-radio at the University of Louisville and televised courses at DePaul University (Ahmad et al., 2020). Although some experimental studies have been made about virtual design studios, the idea that architectural education cannot be given fully online remains dominant. It is appropriate to examine distance learning in architectural education in three parts.

Before the Pandemic

Studio teaching in architecture and design is traditionally based on the presence of both instructors and material learning artefacts. From this triad of students, instructors and learning artefacts, learning emerges. As such, the physical presence of people and materials is a fundamental premise of the traditional studio learning format (Khalid & Steino, 2017). Thus, the idea of fully online architectural education is not prevalent.

When the architecture departments of universities throughout the world are examined, it is seen that:

- FtF education is offered in general;
- Fully online education is preferred in master programmes rather than undergraduate programmes;
- In hybrid learning, students are expected to have basic architectural knowledge as a prerequisite.

Education-type examples of some architecture departments that offer FtF, hybrid, and fully online education are summarised below (see Table 1).

Table 1

Education-type examples of some architecture departments

Name of the University	Country	Degree/ Year	Type	Courses-Requirements	Accreditation
MIT	USA	BSc, 4 Years	FtF	5 Design Studios + Electives + Senior Thesis(Optional)	Accredited by NAAB
Brown University	USA	BSc, 4 Years	FtF	2 Design Studios + Electives + Honours Thesis(Optional)	Not accredited by NAAB
Columbia + Barnard School of Architecture	USA	BSc	FtF	4 Design Studios + 5 Lectures, Seminars & Workshops + 2 Senior Courses + 3 Specialization Courses	Accredited by NAAB
Cornell University	USA	BSc, 5 Years	FtF	10 Design Studios +Non-electives & Electives + Swim Test + Physical Education	Accredited by NAAB
Harvard	USA	M.Arc, 7 Sem.	FtF	5 Design Studios + Non-electives&Electives + Thesis	Accredited by NAAB
The AA	UK	3+2 Years	FtF	Unit (Design Studies) + Technical Studies + Architectural Professional Practice	Accredited by RIBA
Roma Tre University	Italy	3+2 Years	FtF	3 Design Studios + Non-electives & Electives + Final Exam	Recognized by Ministry of Edu.
Athabasca University	CA	BSc, 4 Years	Fully Online	Architectural Major Courses 75 Credits Design Workshop Courses 36 Credits Electives	Accredited by Mid. States Commissions on Higher Education
Academy of Art Uni	USA	BSc, 5 Years	Fully Online	Core Courses + Major Courses + Liberal Arts Electives	Accredited by NAAB
Boston Architectural College	USA	BSc, 2,5 Years	Hybrid (Online Courses + Design Studios)	Prerequisite 2 years college experience in an architecture or design program	Accredited by NAAB
Bircham University	Spain	BSc, 1-3 Years	Fully Online	Program Structure: 100% based on textbooks 60 credits in General Education + 36 credits Architectural Design Online + Other additional subjects	Non-accredited
Catham University	USA	Master Int Arch	Fully Online, FtF or Hybrid	Foundation Courses 12 Credits + Skills Courses 12 Credits + Electives 6 Credits	Accredited by Mid. States Commission on Higher Education
Lawrence Technological University	USA	M. Arch	Hybrid (Online Courses + Design Studios)	32 Credits Online Courses + 4 Credits Design Studios	Accredited by NAAB
Universidade do Porto	Portugal	M. Arch, 5 Years	FtF	5 Design Studios + Non-electives & Electives	Accredited by Min. Of Sci. Tech.&Edu.
Politecnico di Torino	Italy	BSc 3+2 Years	FtF	Design Studios + Construction Studios + Non-electives & Electives + Professional Practice	Recognised by Ministry of Edu.

Name of the University	Country	Degree/ Year	Type	Courses-Requirements	Accreditation
Swiss Federal Institute of Tech, DARCH	CHE	BSc, 3 Years	FtF	6 Design Studios + Non-electives & Electives	Accredited by the State Sect. for Edu, Rsrch&Innov
The Bartlett School of Arch.	UK	BSc, 3 Years	FtF	Design Projects (Units: Field work&trips) + Non-electives	Accredited by RIBA

When the table is examined, it can be seen that the studio courses, which are the foundation of architectural education, are not frequently given online, but in some cases, it is possible. For example, theoretical courses are generally offered online in hybrid learning, but studio courses are offered FtF.

As a consequence of the development of technology, media tools have started to be integrated into education. In architectural education, this integration manifests itself as 3D Models and BIM applications. Integration of digital media is critical to design and architectural education. Technology has radically changed the way lecturers can exchange information with students. With the ever-increasing need to communicate globally, distance is no longer a barrier to education. Many architecture faculties worldwide have offered their courses online at a cost or free of charge (see Figure 3). However, online courses, which are offered as a backup for FtF education, are not considered sufficient to obtain a Bachelor's degree in architecture.

Figure 3

Examples of online courses in MIT

Note. Adapted from MIT, n.d.

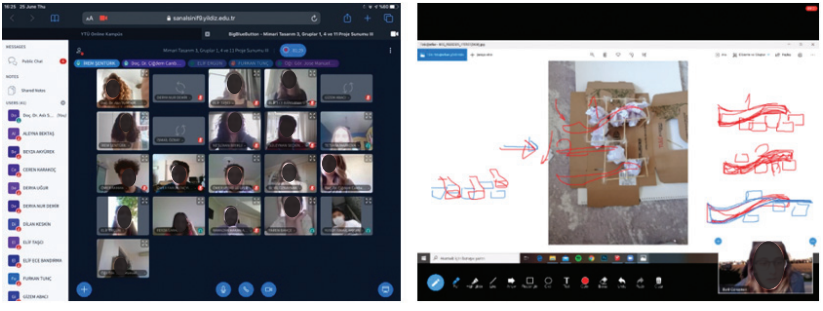
Although alternative media tools have been integrated into education, the framework of studio instruction has essentially remained unchanged. The contradiction between distance learning and architectural education in distance learning can be asynchronous; however, architectural education needs FtF communication (Sakarya, 2019).

During the Pandemic: Emergency Remote Teaching

As a consequence of the declaration of Covid-19 as a pandemic, educational institutions had switched the education type rapidly and on the spur of the moment. Normal classes were shifted into e-classes overnight, and educators had shifted their pedagogical approach to adapt to the changing situations (Dhawan, 2020). Thus, it would not be accurate to define this system as 'distance learning'. Instead, Hodges et al. (2020) define this process as 'an adaptation to existing conditions'. From this point of view, this system will be addressed as; 'Emergency Remote Teaching' in the study.

In emergency remote teaching, universities rapidly created virtual classes and continued the education within the body of their existing distance learning platforms (see Figure 4). Furthermore, courses were recorded, and students were able to access the recordings later. Some faculties provided their staff with technological equipment in this extraordinary period. Moreover, some universities used informal platforms instead of or in addition to their existing distance learning platforms (Dunton, 2020).

Figure 4
Architectural Design 3, Yildiz Technical University (Sungur Archive)



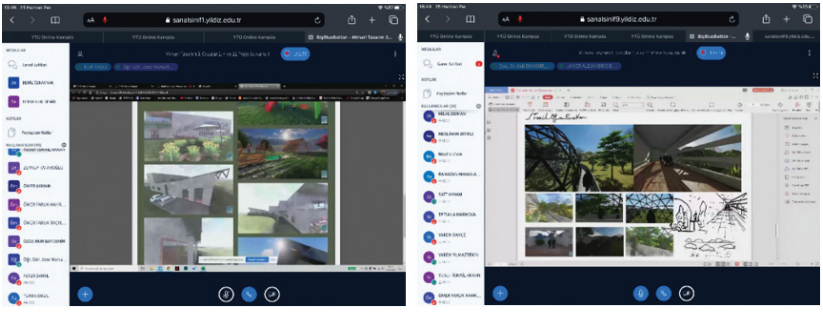
Emergency remote teaching enabled criticism of the traditional design studios, which is thought unlikely to be held online within the master-apprentice model that had been used for generations (Archinect, 2020). This crisis

forced the institutions, which were earlier reluctant to change, to accept modern technology. Doing so provided an opportunity to redefine and interpret the learning and teaching experiences of architecture departments.

The design juries were held online, with guest jury members, during the semester and at the end of the semester, the same as it was before (see Figure 5).

Figure 5

Design Jury of Architectural Design 3, Yildiz Technical University



Note. Sungur Archive.

There are four categories of competencies necessary for dealing with e-learning situations: technical, managerial, pedagogical, and academic (Vladescu, 2016). Moreover, online education was challenging for faculty staff in terms of time management because courses and juries took longer than FtF education. For example, the faculty staff of Yale University stated that they spent more time and energy maintaining student relationships, managing and teaching (Archinect, 2020). The University of Pennsylvania's Stuart Weitzman School of Design mentioned that they became efficient in education because the first part of the semester was FtF and the system was hybrid before the emergency remote teaching (Hilburg, 2020).

After completing the spring semester of 2020, architecture departments started to discuss which model of education would be offered for the next semester. While some faculties have announced their decisions for the fall semester of 2020, some have not decided about the mode of education yet. The possibility of a new wave of the pandemic in the autumn has forced universities to change their initial planning. These decisions have been actively responding to the ongoing developments related to this outbreak. The education plans for the fall semester of 2020 of some universities as of 8 July 2020 are given below (see Table 2).

Table 2

Fall semester education plans of some universities as of 8 July 2020

Name of the University	FtF	Hybrid	Fully Online	Notes
University of Cambridge		X		In any case, all lectures will be recorded and made available online
The AA			X	
Cornell University		X		
MIT			X	Some small group FtF
University of Bologna (As of 26 May 2020)		X		Synchronous or asynchronous, limited number of FtF
University of Salzburg (As of 29 June 2020)	X			Planning normal, Considering hybrid
University of Jaen (As of 29 June 2020)		X		
Hochschule Kaiser-slautern (As of June 24 2020)		X		Most courses will be online, some lessons and some exams could be FtF
Technical University of Wien (As of 6 July 2020)	X			Depending on the evolution of the situation
University of Turin			X	Incoming students will not be allowed to attend FtF activities
Complutense University of Madrid (As of 7 July 2020)	X			Depends on the evolution of the situation
Technical University of Madrid (As of 2 July 2020)		X		Hybrid Learning
University of Galati (As of 17 June 2020)				Have not decided yet, depending on the evolution of the situation
Carlos III University of Madrid (As of 8 July 2020)		X		- Large/aggregate session: Theoretical content. Synchronous online teaching. - Small group session: Practical content. Face-to-face teaching in the classroom. - Laboratories: Face-to-face or online synchronous teaching
University of Granada (As of 1 July 2020)		X		
University of Athens (As of 7 June 2020)			X	Depending on the evolution of the situation
University of Wroclaw (As of 8 July 2020)		X		All lectures will be online, seminars and small group sessions will be FtF

International Exchange Programs

The fact that the current process is a global epidemic forces the universities to make decisions about the education plans and the international student exchange programs. In the study, it was examined that the documents of Erasmus exchange programs of some European universities. Many universities (e.g., University of Bologna, University of Jaen, University of Wien, University

of Salzburg) are allowing incoming students to postpone their education to the next semester, while other universities are not accepting exchange students for the 2020 Fall semester (A. Zemann, personal communication, 3 July 2020; F. Valente, personal communication, 26 May 2020; M. Wonneberger, personal communication, 25 June 2020; University of Jaen, personal communication, 26 June 2020). The University of Turin has declared that they will not accept exchange students in FtF courses (A. T. Bernini, personal communication, 2 July 2020). The University of Pennsylvania has stated that they insist on the FtF model, and they can re-arrange the academic calendar according to the most recent conditions of the pandemic.

Online Architectural Education with a Focus on Quality

Emergency Remote Teaching, which was started unplanned, took longer than anticipated. As a result, a considerable amount of first-year students who began higher education in 2020 do not have an on-campus experience, and it remains uncertain when FtF education will start.

The quality of teaching and learning is also determining the quality of results. A poor learning design will result in a poor learning experience for both the students and the instructor. SWOC analyses of emergency remote teaching can be a road map to improve the quality of online education.

Figure 6

SWOC analyses of emergency remote teaching

Strengths - Location flexibility - Recorded courses	**Weaknesses** - Technical issues - Internet infrastructure - Unavailability of proper digital tools
Opportunities - Time flexibility - Technological development of modes of education	**Challenges** - Quality of education - Technological inequality - Time management

Pedagogically, before the pandemic, lecture materials or design project requirements are explained by the lecturer in front of the class, followed by interaction by giving the student feedback and, generally, there is a task at the end. However, during this online education, some routines of learning interactions changed (Allo & Deli, 2020).

During the pandemic, one of the main concerns was the efficient provision of the interactive education environment based on the master-apprentice

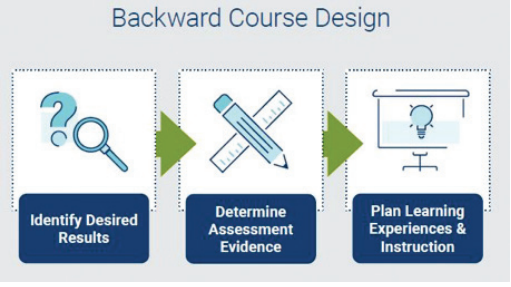
system established in the physical studio environment in the new distance education-teaching model (Ceylan et al., 2020).

According to Chapnick's Criteria for E-Learning Readiness, seven important factors ensure the quality of e-learning in higher educational institutions (Elumalai et al., 2020).

- Administrative support
- Course content and design
- Course design
- Social support (pedagogical approach)
- Technical support
- Instructor characteristics
- Learner characteristic

Course design is one of the major factors affecting the quality of online learning. There are many approaches to instructional/course design. The Backward Course Design Model, developed by Grant Wiggins and Jay McTighe in 2012, suggests that instruction should be developed first with the end goal in mind. Planning and development start with the course outcomes, and the curriculum is derived from what is needed to achieve those results (see Figure 6).

Figure 7
Backward Course Design Model



This approach can be used for Emergency Remote Teaching. For developing online courses for future terms, this model provides a framework for effective course design (O'Kefee et al., 2020).

Instructors should attempt to expand their students' horizons by explaining what is meant by online learning in a design studio environment at the beginning of the year. Tutors should also explain how the courses will be evaluated and establish the requirements and responsibilities expected from the students (Alnusairat et al., 2020).

As mentioned, student-student interaction is necessary for the quality of design education. Instructors should allow their students to critique other students' projects and see their works throughout the year. Some digital platforms (e.g., Miro, Mural) offer online visual collaboration for teamwork and enable working synchronously. This can be helpful for students to see the progress of their own and their friends over the course of the semester (see Figure 7).

Figure 8

Basic Design board in Miro

Note. Unver archive.

The absence of informal discussions and the spontaneity of exchanging ideas could be the reason for the diminished efficacy of the studio environment. Digital tools allow studio collaborations between institutions with participation from multiple locations by reducing distance barriers (Jafri & Varma, 2020).

Experiences and Opinions: A Case Study on Online Education During Covid-19

Covid-19 suddenly changed the course of architectural education, which is design-based with applied courses. To maintain the quality of architectural education, researching ongoing implementation, determining the experiences, opinions and approaches of students and academic staff, and defining the positive and negative aspects of the process are important. In this study, how faculty staff and students were affected by this unplanned shift has been investigated to identify the key point of future research about the new orientations of architectural education.

Within the scope of the study, the Architectural Departments of two universities in Istanbul (Yildiz Technical University and Kultur University) are chosen for the case study, one being a public university and the other a private one. The students and academic staff were asked for their experiences and opinions about the process and methods of distance learning. Between March 2020 and July 2020, two questionnaire forms were developed to be completed by 190 architecture students and 50 faculty staff of the mentioned universities as the data collection tool.

The questionnaire form for students consisted of three parts and 22 questions; the first part was demographic and accommodational questions, the second part was opinions and experiences, and the last part was open-ended questions about emergency remote teaching. The questionnaire form for academic staff consisted of three parts and 21 questions; the first part was demographic questions, the second part opinions and experiences, and the last part open-ended questions about emergency remote teaching.

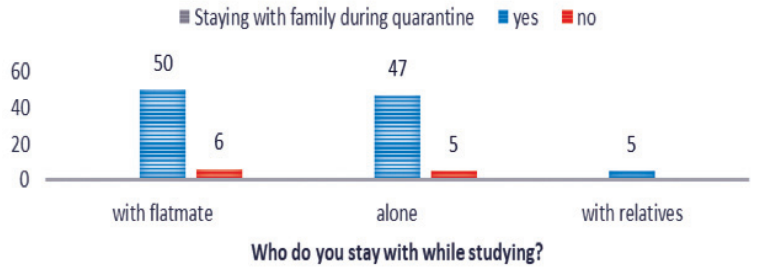
Responses to the second part were made on a five-point Likert-type scale ranging from 1 = 'Strongly Disagree' to 5 = 'Strongly Agree'. SPSS (Statistical Package for Social Sciences) program was used to analyse the data collected via the questionnaire.

Findings

This study was conducted to examine; adaptation to online learning, the technical infrastructure of existing distance learning platforms of mentioned universities, self-expressions skills of the students', effects of the accommodation status to focusing and learning. There is a meaningful relationship between accommodation status and focusing problems of the students'. In addition to this, there also is a significant relationship between the sense of being a student and online learning. However, there is no meaningful relationship between online learning and self-improvement in presentations skills.

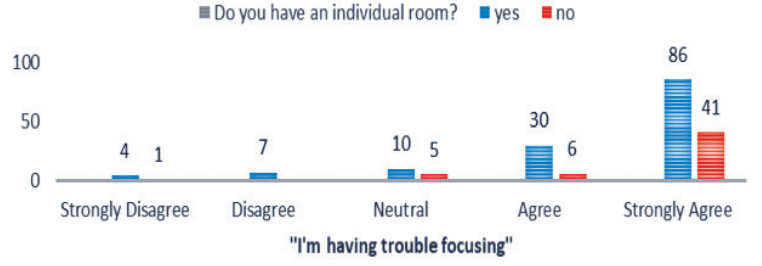
In the questionnaire, opinions and experiences of the students about emergency remote teaching were asked. According to the questionnaire, 40.5% ($n = 77$) of the students were living with their parents, 29.5% ($n = 56$) of students were living with a flatmate, 27.4% ($n = 52$) of students were living alone, and 2.6% ($n = 5$) of students were living with their relatives while studying at the university. During the quarantine, 90.3% ($n = 102$) of the students who were not living with their parents while studying moved back to their parents' house (see Figure 9).

Figure 9
Accommodation status before & during the pandemic



A total of 84.6% (n = 116) of the students who have an individual room in their houses had trouble focusing during emergency remote teaching (see Figure 10). Thus, before the pandemic, it can be said that it is important to have an individual room to focus, but there is no meaningful relationship between them during the pandemic.

Figure 10
Focusing problems whilst having a room of her/his own



When asked about the opinions and experiences about; adaptation to online learning, technological infrastructure, and the availability of distance learning platforms, the analysis of the students' answers is as follows (see Table 3).

Table 3

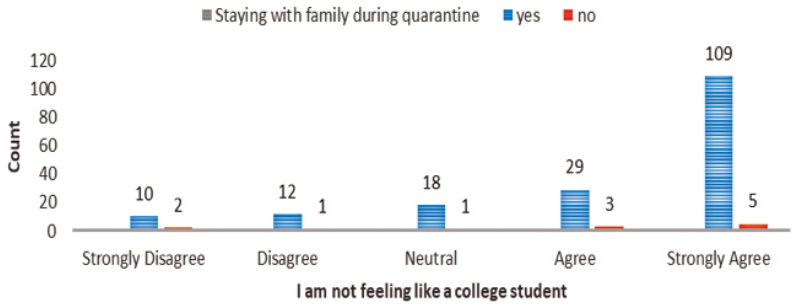
Assessments of students' responses to 'sense of learning' and 'focusing' questions

Questions	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
I had trouble adapting to distance learning.	4.2	12.6	15.8	21.1	46.3
The internet infrastructure where I live is adequate for online learning.	10.5	14.2	24.7	24.2	26.3
The quota of my internet is adequate for online learning.	23.7	13.2	22.1	17.4	23.7
The 'Distance Learning Platform' of my university is adequate for theoretical courses.	11.1	11.6	28.9	30.5	17.9
The 'Distance Learning Platform' of my university is adequate for applied courses.	53.7	17.4	16.8	6.8	5.3
It was easy to use the 3D Model Program instead of model making.	31.6	17.9	22.6	14.7	13.2
Not being in the studio environment is affecting my design capacity	12.1	5.8	12.1	15.3	54.7
I am having trouble focusing on courses.	2.6	3.7	7.9	18.9	66.8
The fact that family members are at home causes a lack of concentration.	11.6	9.5	11.1	22.6	45.3
I have difficulty expressing myself in virtual classes.	7.9	8.4	22.1	19.5	42.1
Distance learning reduced my school expenses.	3.2	3.2	7.9	17.9	67.9
Online design studio courses helped to improve my presentation skills.	30.5	22.1	24.7	11.1	11.6
It is challenging to access resources because of being absent on campus	8.9	13.2	19.5	22.1	36.3
Physically not being on campus makes me feel like I am not a college student.	6.3	6.8	10	16.8	60

When Table 3 is examined, it is seen that majority of the students had trouble adapting to distance learning (67.4%). Moreover, 60% of students strongly agree that 'physically not being on campus' makes them feel like they are not college students. Even if they continue living with friends, they also feel the same way (see Figure 11). In addition, a significant number of the students (61.8%, n: 118) stated that they have difficulty expressing themselves in virtual classes; 48.4% of the students stated that the existing distance learning platform of their universities are adequate for theoretical courses. However, the majority of the students (71.1%) found the same platforms to be inadequate for applied courses. Moreover, students had trouble focusing on courses (85.7%) and the fact that family members were at home caused a lack of concentration. A

significant number of the students had stated that distance learning reduced their school expenses.

Figure 11
'Sense of being a student'



When the universities' existing Distance Learning Platforms are evaluated, regardless of being at private or public universities, they are found to be almost adequate for theoretical courses. In contrast, the same platforms are stated as being inadequate for applied courses (see Figures 12 and 13).

Figure 12
Adequacy of DLP for theoretical courses

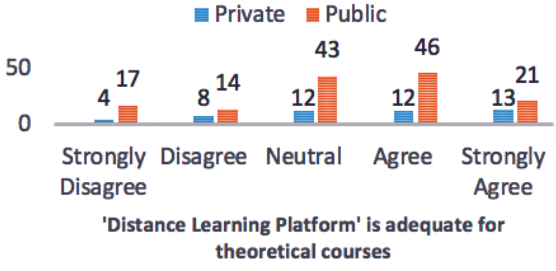
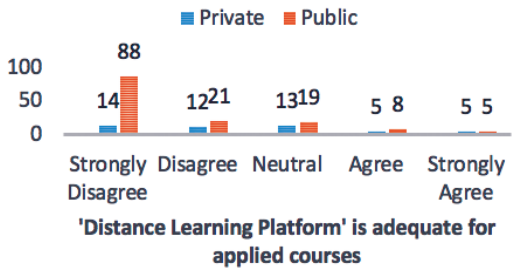


Figure 13
Adequacy of DLP for applied courses



As for the faculty staff, the advantages and the disadvantages of emergency remote teaching can be seen in Figures 14 and 15.

Figure 14
The advantages of emergency remote teaching, according to the lecturers

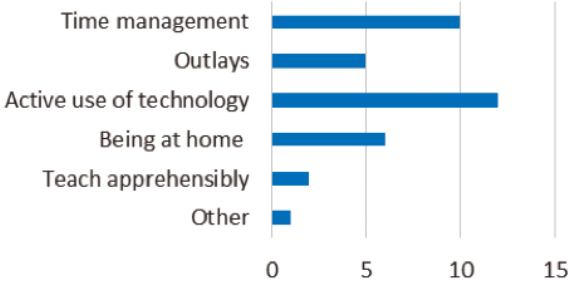
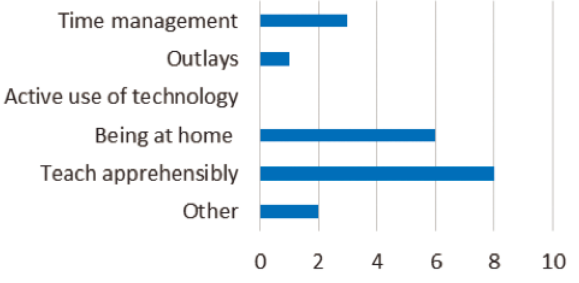


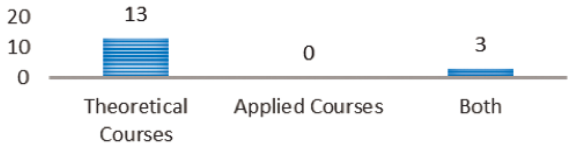
Figure 15
The disadvantages of emergency remote teaching, according to the lecturers



According to answers given to the survey, the faculty staff stated that they are eager to continue using the opportunities offered by online education, including thesis interviews, student interviews, online exams, and informal digital platforms, when they return to FtF education. In addition, academic staff answered in favour of supporting teaching online for theoretical courses (see Figure 16).

Figure 16

'Do you think faculty should be supported to do online teaching?



Discussion

Academical education around the world is facing a once-in-a-century event. Since an extraordinary situation is being experienced, the psychology of the students and the academic staff are also affected by the process, and various kinds of problems and challenges about concentration and adaptation have emerged. The questionnaire results showed that students had trouble focusing on courses in the case of returning to live with their parents, whether they have a sufficient room or a space of their own to study and work in or not. The presence of the family members seemed sufficient for the students to lack concentration. Some architecture departments continued teaching even on religious and national holidays in order to keep students concentrating. The Council of Higher Education referred to 'assessments of the students' as a recommendation to universities on 22 May 2020 and stated that 'homework, projects and attendance in courses should be evaluated in addition to online exams during the Covid-19' (Council of Higher Education, 2020).

As a result of the survey, the faculty staff stated that theoretical courses could be given online when education returns to FtF teaching. During the emergency remote teaching, faculty members realised that even if the system were not to continue fully online, all courses did not need to be offered via fully FtF teaching.

FtF education can be considered successful because it creates an educational environment that includes libraries, social activities, campus life, and related elements. It is seen that physically not being on campus makes the

students feel like they are not college students, which was related to the issue of 'the sense of belonging'. The fact is that the physical campus environment has a strict framework, and expectations from the students are clear.

However, bringing the students and the instructors together in a digital environment provides accessibility and equity for students with financial difficulties and some types of disabilities. In contrast, the existing distance learning platforms of the universities are not accessible and inclusive for different conditions of disabilities such as visually- and hearing-impaired students. Moreover, previous to the pandemic, architectural education was based on models and hard copies in school; emergency distance learning forced the people involved to think about the issues of carbon footprint and sustainability. The significant decrease in education expenses of the students reveals the necessity of the sustainability and inclusivity of the education from this point on. The factors, which affect the success of the emergency remote teaching are flexible course hours, ongoing daily routines and living with the family members during the quarantine.

Herein, to compare distance learning and emergency remote teaching instead of distance learning and FtF education emerges as a necessity to understand the differences between these methods (see Table 4).

Table 4

Comparison between Distance Learning and Emergency Remote Teaching

Distance Learning	Emergency Remote Teaching
Planning, arrangement and development processes of the distance learning based on 6-8 months before the courses.	Trying to adapt existing curriculum. Unplanned and rapid transition.
The students have sufficient technological equipment for courses he/she will take.	The students do not have equal technological equipment for distance learning.
Technical staff have enough time and experience for ideal solutions to the problems.	Technical staff solved problems sooner than anticipated.
Courses can take place in synchronous and asynchronous ways.	Courses had to take synchronously because of the compulsory attendance.
Courses are planned according to distance learning.	This is a situation that FtF courses are given online.
Time management is under the initiative of the instructor.	Instructors are having time management problems because of working in the home environment.

Emergency remote teaching broke down the prejudices about architectural education, which had been thought to be unlikely to be provided online. However, it can be seen in Table 4, the transition to distance learning in the shadow of Covid-19 brought some technological issues with it.

Conclusions

The threat of Covid-19 has presented some unique challenges for institutions of higher education; students, faculty and staff are needed to achieve extraordinary things regarding course delivery and learning. The concept of effective distance learning results from careful instructional design and planning and using a systematic model for design and constant development.

However, the rapid and unplanned transition to online learning has caused a lack of opportunities to benefit from, and students are to failing to achieve the existing potential of the academic environment. It has been revealed in this study that; the existing distance learning platforms of the universities are not adequate for architectural education during the extraordinary times that academia has experienced. This inadequacy is not necessarily a technical issue; rather, it is related to the unique essence of architectural education, as explained in the previous parts of this study. To obtain the competence of the distance learning platforms for architectural education, it is necessary to tailor-design the interfaces and the opportunities of these platforms according to the characteristics of this specific education itself. Moreover, universities constantly need to develop their distance learning platforms and ensure the continuity of the response to the emerging needs. Well-planned online learning is important for achieving institutional goals of both teaching and learning in higher education.

The suggestions to maintain and develop the quality of online architectural education, based on the reviews and the case study, are classified as administrative support, course content and design, technical support, pedagogical, and social support. These suggestions are given as follows:

Administrative support

- Providing access to the suitable/agreed on software(s) and applications (e.g., Zoom, Blackboard, etc.)
- Encouraging innovative course design, material and teaching tools without any bureaucratic setbacks.
- Using asynchronous learning solely for theoretical courses.
- Adopting national and international accreditation systems to online education and developing ways to ensure the quality of education

Course content and design

- Offering information in more than one format
- Providing data in different forms such as 3D maps, analysis files, etc.
- Integrating digital media, 3D Models and BIM applications

- Avoiding static slides or bulleted lists. Instead, stimulating different types of students; visual, auditory, reading/writing or kinaesthetic.
- Trying to expand students' horizons by explaining what is meant by online learning in a design studio environment.
- Explaining course evaluations and establishing the requirements and responsibilities expected from the students.
- Providing that all of the class is present on time
- Agreeing on the terms on the use of webcam and mic

Technical support

- Providing access to sufficient wireless connection and speed
- Providing access to suitable hardware for the lecturers (e.g., pen-based tablet)
- Making recorded courses accessible offline
- Providing two screens for the lecturers;

Pedagogical and social support

- Encouraging informal conversations among students outside the class hours via group chat
- Using some digital platforms to provide online collaboration between students (e.g., Miro, Mural, etc.)
- Giving the students more than one way to interact with the lecturer and each other and letting the students make choices
- Looking for multiple ways to motivate students

In the post-pandemic period, if institutions can analyse their weaknesses and strengths, they will be able to respond better to the next threats or, even better, they will be able to use this crisis as an opportunity to transform their method of education and offer a more accessible, cost-effective and sustainable instructional environment. This unplanned and urgent shift has shown us that we can embrace online teaching methods as an alternative that is neither worse nor better than FtF teaching.

This crisis also can be used by the faculties to reach beyond their borders.

The pandemic showed that policymakers should also design an Emergency Education Plan similar to the Disaster and Emergency Plan. In this period, the recommendations of the Council of Higher Education to universities about disabled students remained unfulfilled. This experience indicated that the rules and standards for accessibility and equity of disabled students in distance learning should be more neat and well-defined. Governments and institutions

have to focus on the design of flexible, inclusive and student-centred educational environments to ensure that all students have access to and benefit from course materials, activities and assignments.

Apart from these evaluations, an important fact to consider is that the existing physical spaces of most architecture faculties are not designed with the concept of 'education with social distancing' in mind. Therefore, the imagination of an architectural education, which is non-spatial and in interaction with different countries, is necessary. Future architects and educators will need to adapt themselves to the new normal and find a way of developing different ways of thinking in this period where the information is constantly changing. The main goal should be increasing the quality of interaction regardless of being online or FtF teaching, without losing the master-apprentice relationship established in traditional architectural education.

References

Ahmad, L., Sosa, M., & Musfy, K. (2020). Interior design teaching methodology during the global Covid-19 pandemic. *Interiority*, *3*(2), 163–184.

Allo, G., & Deli, M. (2020). Is the online learning good in the midst of Covid-19 pandemic? The case of EFL learners. *Jurnal Sinestesia*, *10*(1), 1–10.

Alnusairat, S., Al Maani, D., & Al-Jokhadar, A. (2020). Architecture students' satisfaction with and perceptions of online design studios during Covid-19 lockdown: the case of Jordan universities. *Archnet-IJAR: International Journal of Architectural Research*, *15*(1), 219–236.

Archinect. (2020). *Architecture deans on how covid-19 will impact architecture education*. https://archinect.com/features/article/150195369/architecture-deans-on-how-covid-19-will-impact-architecture-education.

Bender, D. M., & Vredevoogd, J. D. (2006). Using online education technologies to support studio instruction. *Education Technology & Society*, *9*(4), 114–122.

Bitzer, D. L. (1986). The PLATO project at the University of Illinois. *Engineering Education*, *77*(3), 175–80.

Celik, D. (2017). Assessment of the practices of distance education centers in universities of Turkey in terms of adult education (Doctoral dissertation, University of Ankara). https://tez.yok.gov.tr/UlusalTezMerkezi/giris.jsp

Ceylan, S., Sahin, P., Secmen, S., Somer, M. E., & Suher, K. H. (2020) An evaluation of online architectural design studios during Covid-19 outbreak. *Archnet-IJAR: International Journal of Architectural Research*, *15*(1), 203–218.

Council of Higher Education. (2020, May 7). *Council of higher education takes action towards the troubles of disabled students in distance learning*. https://www.yok.gov.tr/Sayfalar/Haberler/2020/engelli-ogrenciler-icin-uzaktan-egitim.aspx

Council of Higher Education. (2020, May 27) *Council of higher education announced the basic principles of the exams to be held in digital environment*. https://www.yok.gov.tr/Sayfalar/Haberler/2020/ universitelerde-dijital-sinavlarin-temel-ilkeleri.aspx

Dhawan, S. (2020). Online learning: A panacea in the time of Covid-19 crisis. *Journal of Educational Technology Systems*, *49*(1), 5–22.

Dunton, J. (2020). How Covid-19 is changing the face of architecture schools. https://www.bdonline.co.uk/news/how-covid-19-is-changing-the-face-of-architecture-schools/5105159.article

Elumalai, K. V., Sankar, J. P., Chandrahasan, R, K., John, J. A., Menon, N., Alqahtani, M. S. N., & Abumelha, M. A. (2020). Factors affecting the quality of e-learning during the Covid-19 pandemic from the perspective of higher education students. *Journal of Information Technology Education: Research*, *19*(1), 731–753.

Ghonim, M., & Eweda, N. (2018). Investigating elective course in architectural education. *Frontiers of Architectural Research*, *2018*(7), 235–256.

Harting, K., & Erthal, M. (2005). History of distance learning. *Information Technology, Learning and Performance Journal*, *23*(1), 35–44.

Hilburg, J. (2020). The Coronavirus pandemic is forcing architectural schools to rethink remote learning. https://www.archpaper.com/2020/06/coronavirus-pandemic-architecture-schools-rethink-remote-learning/

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Jafri, M. S., & Varma, A. (2020). Covid-19 responsive teaching of undergraduate architecture programs in India: learnings for post-pandemic education. *Archnet-IJAR: International Journal of Architectural Research*, *15*(1), 189–202.

Kaya, Z. (2002). *Uzaktan eğitim* [Distance learning]. Pagem A.

Khalid, S., & Steino, M. (2017). The hybrid studio – introducing Google+ as a blend learning platform for architectural design studio teaching, *Journal of Problem Based Learning in Higher Education*, *5*(1), 22–46.

MIT Open Courseware. (n.d). *Architecture*. https://ocw.mit.edu/courses/architecture/

Morin, A. (2014). *What is universal design for learning (UDL)? Understood.* https://www.understood.org/en/learning-thinking-differences/treatments-approaches/educational-strategies/universal-design-for-learning-what-it-is-and-how-it-works

O'Keefe, L., Rafferty, J., Gunder, A., & Vignare, K. (2020). *Delivering high-quality instruction online in response to Covid-19: faculty playbook*. Every Learner Everywhere. https://www.everylearnereverywhere.org/resources/delivering-high-quality-instruction-online-in-response-to-covid-19/

Sagun, A., Demirkan, H., & Goktepe, M. (2008). A framework for the design studio in web-based education. *Journal of Art & Design Education*, *20*(3), 332–342.

Sakarya, K. (2019). Suggestions of distance education models for interior design education. *Journal of*

Çukurova *University Institute of Social Sciences*, *28*(2), 388–401.

Tekeli, I. (2014). *Architectural Education*. http://www.mimarlikdergisi.com/index.cfm?sayfa=mimarlik&DergiSayi=392& RecID=3442

Vladescu, I. (2016). Digital competences for teachers. In O. Titrek, I. Mikelsone, L. Pavitola, & G. S. Gultekin (Eds.), *International conference on lifelong education and leadership for all* (pp. 716–721). Sakarya University Faculty of Education.

Yildiz Technical University. (2020). *Internship*. http://www.mim.yildiz.edu.tr/mim/26/Staj/162

Biographical note

Emel Unver, PhD, is a lecturer at the department of industrial design on the Faculty of Engineering and Architecture at Beykent University, Istanbul. Architect since 2010. Her master's degree in 2019 in Yildiz Technical University, Architectural Design Programme with a thesis entitled 'Interpretation of Space Organizations in Traditional and Alternative Education Systems According to Space Requirements of Primary School Children'. She continues her PhD studies at Yildiz Technical University, Istanbul. Her main areas of research are education buildings, education systems, architectural education, gifted children and their space requirements.

Asli Sungur, PhD, is a tenured associative professor at the Building Science Department of the Yildiz Technical University (YTU), Istanbul. Architect since 1998. She is Master Architecture by Istanbul Technical University (ITU), 2001 and also PhD in Architecture by YTU, 2006. Lecturer in the Department of Architectural Design at YTU (design courses and architectural design studios, seminars, courses in graduate program in YTU, supervising masters and PhD thesis, co-supervising thesis in ITU) since 2001. She has research works and publications about squatter settlements in Istanbul, public spaces, healthcare buildings and inclusive design. Published a book and has chapters in books, papers in several journals and has co-authored several publications. Her most recent publications include a book on 'Inclusive Design in Architecture' (2013), a chapter in the book; 'Istanbul Urban Design Guide', by Istanbul Metropolitan Municipality (2016), a chapter in the book; 'Towards a Barrier-free Turkey: Where Do We Stand? The Status Quo and Proposals' by Sabanci University (2013), and a paper; 'Inclusive Design for Urban Spaces'. Departmental coordinator of Erasmus+ Programme in YTU.

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Parents' Opinions about their Children's Distance Learning during the First Wave of the Covid-19 Pandemic

Maja Drvodelić*[1] and Vlatka Domović[2]

Due to the Covid-19 pandemic, distance education became the only official form of instruction in all schools in Croatia for a period commencing 16 March 2020. This situation changed the expectations, roles and responsibilities of parents with regard to the teaching and learning process of their children. Understanding parents' experiences during school closure is important for the development of recommendations for similar situations.

This paper presents part of the results of an online survey investigating the opinions of 1,205 parents of primary school children on various aspects of distance education. The responses were analysed by researchers using the thematic analysis approach. The initial answers of parents regarding the positive and negative aspects of education during the lockdown were grouped into categories. The results indicate that distance education positively contributed to the development of children's self-regulated learning and to providing greater parental support in learning, as well as empowering children in using ICT. Parents emphasise positive changes in the quality of family relationships, which are partly the consequence of joint learning with their children and partly due to changes in the way of life during the lockdown. Negative aspects can be divided into two general categories, the first of which is linked to children (e.g., lack of support from school, lack of children's interest in learning), while the second refers to the challenges faced by parents (e.g., fear of school failure, undertaking the double role of custodian and teacher).

The findings suggest the need for the development of recommendations that would provide support for parents and children in situations where the teaching and learning process take place in an online environment.

Keywords: Covid-19, distance education, parents, primary school

1 *Corresponding Author. Faculty of Teacher Education, University of Zagreb, Croatia; drvodelic.maja@gmail.com.

2 Faculty of Teacher Education, University of Zagreb, Croatia.

Mnenja staršev o učenju njihovih otrok na daljavo med prvim valom pandemije covida-19

Maja Drvodelić in Vlatka Domović

Zaradi pandemije covida-19 je izobraževanje na daljavo od 16. marca 2020 naprej postalo edina uradna oblika pouka v vseh šolah na Hrvaškem. Ta situacija je spremenila pričakovanja, vloge in odgovornosti staršev v povezavi s procesom poučevanja in učenja njihovih otrok. Razumevanje izkušenj staršev med zaprtjem šol je pomembno za pripravo priporočil za podobne situacije. V prispevku je predstavljen del rezultatov spletnega vprašalnika, v katerem so bila preučena mnenja 1.205 staršev osnovnošolskih otrok o različnih vidikih izobraževanja na daljavo. Odgovore so raziskovalci analizirali z uporabo pristopa tematske analize. Prvotni odgovori staršev glede pozitivnih in negativnih vidikov izobraževanja med zaprtjem so bili razvrščeni v kategorije. Rezultati kažejo, da je izobraževanje na daljavo pozitivno prispevalo k razvoju otrokovega samoreguliranega učenja in zagotavljanju večje podpore staršev pri učenju ter opolnomočenju otrok pri uporabi IKT. Starši poudarjajo pozitivne spremembe v kakovosti družinskih odnosov, ki so deloma posledica skupnega učenja z otroki, deloma pa so posledica sprememb v načinu življenja med zaprtjem. Negativne vidike lahko razdelimo v dve splošni kategoriji, od katerih je prva povezana z otroki (npr. pomanjkanje podpore šole, pomanjkanje zanimanja otrok za učenje), druga pa se nanaša na izzive, s katerimi se spoprijemajo starši (npr. strah pred šolskim neuspehom, prevzemanje dvojne vloge, tj. skrbnika in učitelja). Ugotovitve kažejo na potrebo po oblikovanju priporočil, ki bi zagotovila podporo staršem in otrokom v situacijah, ko proces poučevanja in učenja poteka v spletnem okolju.

Ključne besede: covid-19, izobraževanje na daljavo, starši, osnovna šola

Introduction

Research context

On 11 March 2020, the World Health Organisation (WHO) (2020, 11 March) declared Covid-19 (SARS-CoV-2) a pandemic. Only two days later, on 13 March, WHO (2020, 13 March) issued an announcement saying that Europe had become the epicentre of the pandemic. On the same day, the Government of the Republic of Croatia issued the *Decision on Suspending Live Teaching at Universities, Secondary and Primary Schools as well as Institutions of Pre-Primary Education and Care and Introducing Distance Online Instruction*, thus making distance education the only official form of instruction at all primary, secondary and tertiary education institutions as of 16 March 2020. In Croatia, a country with a little over four million inhabitants,[3] this decision directly affected 755,489 children and youth included in education.[4] Despite the fact that at the moment of the outbreak of the pandemic, there was no scientific evidence about the risk of spreading Covid-19 in the school environment, many countries implemented school closures nationwide as part of lockdown measures in an effort to slow community transmission of Covid-19 (Yung et al., 2020). According to UNESCO data (2020), by 16 March 2020, as many as 110 countries around the world had announced school closures nationwide, directly affecting 44% of children and youth included in education, from the pre-primary to tertiary level, and by 24 April 2020, the proportion of children affected had grown to 84.5% in 166 countries worldwide. Although schools remained physically closed, teaching and learning had to continue, and given that their closing happened practically overnight, schools, students and their parents were unprepared for the new situation.

Theoretical background

In the traditional (face-to-face) school setting, parents' support and involvement in their children's learning is consistently associated with positive outcomes for children. Research has shown that there is a strong association between the level of parental involvement and higher academic achievement

3 4,058,165 – Population estimate of the Republic of Croatia – https://www.dzs.hr/Hrv_Eng/publication/2020/07-01-03_01_2020.htm.

4 139,682 – Children in ECEC institutions – https://www.dzs.hr/Hrv_Eng/publication/2020/08-01-08_01_2020.htm.
312,530 – Primary school students – https://www.dzs.hr/Hrv_Eng/publication/2020/08-01-02_01_2020.htm.
145,216 – Upper secondary schools students – https://www.dzs.hr/Hrv_Eng/publication/2020/08-01-03_01_2020.htm.
158,061 – Higher education students – https://www.dzs.hr/Hrv_Eng/publication/2020/08-01-07_01_2020.htm.

(Callahan et al., 1998; Fan & Chen, 2001; Grolnick et al.,1991; Hill & Taylor; 2004; Hoover-Dempsey et al., 2005; Simpkins et al., 2006), school grades (Bandura et al.,1996; Paulson,1994; Tan & Goldberg, 2009), motivation to learn (D'Ailly, 2003; Seginer, 2006), student behaviour (Cassity & Harris, 2000; Taylor & Machida, 1994) and social-emotional development (Melhuish, 2010; Roy & Giraldo-García, 2018).

Unlike the traditional school setting, which has a structured environment and where students learn in the presence of a teacher, distance education provides students with learning resources, while students themselves decide how and when they will complete their assignments according to their needs and the conditions in which they work. Therefore, parental involvement in student academic activities in an online environment is especially important. Stevens and Borup (2015) claim that it is parents who hold the potential to be the key to achievement in online settings. Although existing research results prove that parental support in distance education is positively related to students' academic success (Borup et al., 2014; Liu et al., 2010), there are also investigations that have proved that parents struggle to understand their own role in their children's online education (Boulton, 2008; Stevens & Borup, 2015). Hasler-Waters (2012) identifies four roles that parents can fulfil to improve student engagement in an online environment: organiser, instructor in the learning process, motivator and manager. For parents to fulfil all or at least some of these roles, they need support in developing awareness of the importance of their role, and in developing efficient ways of supporting their children's learning.

The first step in developing a system of support for parents in these novel pandemic-never-before-seen times is to investigate how parents feel about, or what they think of, online instruction and what kind of problems they encounter. At the beginning of the pandemic, parents found themselves in an unenviable situation. Due to the lockdown, they had to reorganise family life and professional obligations, while simultaneously providing online instruction in their homes. It is customary in Croatia that extended family members help parents in childcare. An investigation conducted by UNICEF (Pećnik, 2013) has shown that about 60% of parents use unpaid assistance from family members and/or friends in matters related to family and children. Risking contracting the disease, people who had been involved in childcare, particularly those belonging to vulnerable and high-risk groups, could no longer provide the previously customary support. The total burden of care for the family (parenthood, help with instruction, housekeeping, professional and financial obligations) became almost exclusively the responsibility of parents, who had to face these completely new challenges.

The aim of the present paper is to investigate the opinions of parents of primary school children (grades 1 to 4) on the positive and negative aspects of distance education during the Covid-19 national lockdown.

Method

Participants

The participants in the study were parents, caregivers and family members of students attending the first four grades of primary school. The research comprised 1,205 examinees, of which 88.2% were mothers, 11% fathers, 0.5% caregivers and 0.3% extended family members who had taken over responsibility for children's learning in the period of the research. The term "parents" will be used hereafter to refer to all of the aforementioned participants in the research. The largest proportion of parents included in the research had an undergraduate, graduate or postgraduate university degree (58.4%), while 38.8% had completed secondary education and just 2.8% had only finished primary education. At the time of the study, most of the parents were employed. During the lockdown, 39% of the parents regularly went to work, while 44.9% worked from home. As many as 15.4% of the parents said they were unemployed and 0.7% were retired.

Instruments

The data presented in this paper are part of a larger study on parents' opinions about distance education in the Republic of Croatia during the lockdown. The questionnaire used in the research consisted of three parts. The first part contained questions on the socio-demographic characteristics of the participants, the second part comprised a five-level intensity scale on which the examinees estimated their agreement with statements related to different components of the difficulty of distance education, and the third part comprised open-ended questions in which parents described/gave their own perspective on the positive and negative changes brought about by distance education. This article presents and interprets the data obtained by means of the analysis of the open-ended questions.

Data collection

The investigation commenced on 16 April 2020, exactly one month after the introduction of distance education. It was carried out until 28 April and the process of data collection was divided into two steps. The first step started on 16 April, when student teachers from the Faculty of Teacher Education, University

of Zagreb, started conducting the survey under the supervision and with the help of the researchers. Prior to that, online training for the student teachers was organised, which included discussion of guidelines prepared earlier regarding the method of data collection and ethical concerns (such as voluntary participation of parents, preserving the anonymity of participants). The survey was carried out by phone and via communication platforms (i.e., Zoom, Skype), whereby student teachers asked the questions from the questionnaire and noted the answers on a corresponding form. The second step of data gathering started on 21 April 2020, when the questionnaire was published as a Google Form on social networks and was made available to all interested parents in the Republic of Croatia until 28 April 2020. Parents from the whole country participated in the research on a voluntary basis.

Data analysis

The data analysis was based on a qualitative approach known as inductive thematic analysis (Braun & Clarke, 2006). Thematic analysis is a method used for identifying, analysing and reporting patterns (themes) within data. In the process of data analysis, the key phases and actions developed by Braun and Clarke (2006) were followed.

The first three steps of data analysis were conducted independently by the two researchers.

1) Familiarising with data – multiple reading of answers to the first question (positive characteristics), followed by the answers to the second question (negative characteristics), identifying key words (patterns) and recording observations and ideas.
2) Generating initial codes – sorting all data according to key characteristics = codes (key words).
3) Searching for themes – the researchers independently grouped the data into themes and assigned them potential names.
   In the next steps, the researchers worked together and made a final categorisation and interpretation of qualitative data.
4) Reviewing themes – a joint revision was conducted and the themes were agreed upon, i.e., the potential categories for positive and negative characteristics of online teaching were defined and named.
5) Defining and naming themes – the specifics of potential themes were analysed and refined, and categories were given their final names; the frequency of appearance in each particular category was established.
6) Interpretation of the data obtained.

Results

The answers to the questions about positive and negative changes caused by distance education were analysed using the thematic analysis methodology. The categories of positive and negative changes and their frequency can be seen in Table 1.

Table 1
Positive and negative changes caused by distance education

POSITIVE CHANGES	N	%	NEGATIVE CHANGES	N	%
Self-regulated learning	356	39.12	Children's lack of interest in learning	146	16.08
Improved quality of family relationships	176	19.34	Disrupted quality of family relationships	130	14.32
Benefits of staying at home	120	13.19	Restriction of social contacts	229	25.22
Development of ICT competences	108	11.87	Excessive use of ICT	67	7.38
Parental support in the learning process	85	9.34	Parents' fear of school failure	108	11.90
Teachers' professional involvement	34	3.74	Lack of teacher support	82	9.03
			Overburdening with school tasks	108	11.89
Outliers	31	3.40	Outliers	38	4.18
TOTAL	**910**	**100**	**TOTAL**	**908**	**100**

Positive changes caused by distance online teaching

The first question, "Point out one particularly positive thing (change) brought about by distance education", yielded 860 answers (71.37% of the total number of participants). Parents' responses were coded into 910 positive characteristics of distance education, which were distributed into six categories and outliers.

1. Self-regulated learning

Parents mention positive changes in their children's learning referring to independence and responsibility, organisation of learning time, increased competences in various school subjects, as well as learning motivation.

As the biggest advantage of distance education ($N = 175$; 19.23%) parents point out the development of independence and responsibility in their child.

They noticed independence in learning, homework writing and solving tasks.

"I think students have become more responsible and they think more about the duties they have. My child doesn't need to be encouraged to solve tasks, he's learned to work independently."

"My child has learned that she needs to be organised in order to be successful."

Independently creating a daily schedule and good time organisation have ensured more time for play for some children, and more time for solving school tasks without time pressure for others, thus enabling parents and children to follow a rhythm that best suits their needs.

"The child can take all the time s/he needs and is not limited by the bell or the structure of the school day."

Parents notice a visible improvement in the development of mathematical, reading, language and artistic skills, and mention positive changes in attitude towards learning, whereby they particularly emphasise children's motivation and their increased involvement in learning and independence in investigating.

"The child is encouraged to independently search content for learning and investigating."

"The child understands that it's possible to learn in different ways."

2. Improved quality of family relationships

Parents recognise the improved quality of family relationships as a positive consequence of distance education. In their answers, they point out that they spend more one-on-one time with their children, emphasising the value of family togetherness. Parents notice a deepening of family relationships.

"A lot of quality time is spent in the family environment. We enjoy being all together!"

"The bond between father and son is even stronger."

3. Benefits of staying at home

Parents emphasise that one benefit of distance learning is a more pleasant learning atmosphere in which children feel more relaxed, experience a lower level of stress, and say they are more satisfied and happier. An additional relief for children is the absence of travel to school by school bus or public transport. Parents noticed that one of the benefits of distance learning is that children can sleep longer and are more rested during the day. Parents are aware

that distance learning has contributed to preserving their children's health, particularly from the Covid-19 virus, but also from illnesses that children are more prone to contracting when in a group.

"Since distance learning started, they've never been sick."

"Now my child doesn't waste any time on travelling to school."

4. Development of ICT competences

Parents claim that distance learning has prompted the development of digital competences in children. They mention positive changes in the independent use of computers, tablets, mobile phones, computer programs, applications and the use of digital communication channels.

"The child has learned how to use different web tools."

"Developing computer literacy in children has been increasingly fostered. I believe this way of working will benefit our children immensely in handling the challenges of the modern age. We should consider the fact that this way of functioning awaits them one day when they enter the labour market."

5. Parental support in the learning process

Parents see their own involvement in the learning process of their child as one of the benefits of distance learning. This involvement has contributed to seeing their child with different eyes and in a new light, recognising his/her strengths and abilities, but also noticing the difficulties the child faces and the mechanisms the child uses to overcome them. Some parents have gained greater control over what their child does and how s/he does it.

"I have an insight into everything that's happening and how my child approaches learning content."

"As a parent, I'm more involved in the instruction process now. During normal school, I didn't know much about what they did or didn't do. I can follow what my child does and how s/he progresses and the kind of help s/he needs."

6. Teachers' professional involvement

Parents notice the teacher's effort, his/her extra involvement and the quality of communication, as well his/her availability, his/her individualised approach to the child, and the variety of teaching methods and materials used.

"The teacher can dedicate herself to every individual student better than in the classroom, and she organises her teaching practically alone and with her own materials. She handles the new situation wonderfully and has adapted to the children and to all of us."

Distance education has opened a new perspective for parents, which enables them to appreciate the teacher's work more.

"Only now do I realise how difficult and demanding a teacher's job is. Respect and recognition to all teachers who have chosen this profession and who are willing to dedicate their whole lives to children. I can barely handle one child, while they manage more than twenty children on a daily basis in the classroom."

"I can better understand how demanding a teacher's job is. I don't know how she manages to explain maths tasks to him, and then I remember she has twenty more students who need help. Really, respect for her patience and strong nerves."

7. Outliers

This category comprises answers that have a low rate of occurrence and do not belong to any of the aforementioned categories.

"The positive thing is I can recall content I learned in the first grade and I learn a lot with my child."

Negative changes caused by distance education

The second question, "Point out one particularly negative thing (change) brought about by distance education", yielded 870 answers (72.2% of the total number of participants). The parents' responses were coded into 908 negative characteristics of distance education, which were distributed into seven categories and outliers.

1. Lack of interest in learning

Parents mention a number of difficulties with distance learning related to children's lack of motivation for learning. They express their concern about the impossibility of stimulating their children's interest in learning. Due to the lack of physical presence in the school building, children felt as if they were on holiday and school duties were not compulsory. Additionally, parents noticed a lack of concentration and focus, and observed that extended time was needed to complete tasks.

"Lack of attention, weak concentration and no work discipline. Something that would have taken five minutes to solve at school, takes half an hour at home. With time, he gets more and more demotivated."

"My son thinks he is on holiday all the time and doesn't take learning seriously."

"I'd say my child is not too motivated for school and his duties, compared to before. Often during the day, he needs to be reminded to do his tasks and duties he 'has forgotten'. With this way of work, children are harder to motivate."

2. Disrupted quality of family relationships

Parents' comments suggest a deterioration in the quality of family relationships due to the pressure to participate in the education of their children in a new way. They say they are expected to take over the role of teacher, although they lack the necessary competences. Distance education requires parents to spend a lot of time supporting their children's learning, and also requires time for communication with the teacher.

"The child is confused by the role of the parent, who has perforce become a teacher, and this creates a tense child-parent-as-teacher relationship."

"I don't spend time with my child as a mum, but as her teacher, while in her free time I work. The mother-daughter relationship isn't how I imagined it anymore."

Parents mention the increased level of stress due to overburdening and lack of time, which affects the daily routine of the family.

"It's terribly stressful to combine work from home with school content. Either the child suffers, or my job does."

"I'm under stress because I have to do the teacher's work, which shouldn't be a parent's task. We have our children we need to raise and feed, a life, a job. It isn't easy for us parents to be both parents and teachers simultaneously."

3. Restriction of social contacts

Parents say that children's separation from their friends and the impossibility to communicate with classmates and their teacher are a big problem caused by distance education.

"My child complains every day how he misses his friend. He says he can hardly wait to sit at his classroom desk and tell his friend what he was doing while they were at home."

"After the experience with distance education, I would never home school my child. School content is not a problem, or the ability to teach my own child, but the lack of social interaction with the teacher and peers is a major disadvantage."

4. Excessive use of digital tools

Parents say that children spend too much time in front of a screen: computer, mobile phone or TV. Some of their comments refer to the negative consequences this has for a child's development and health, such as neck and back pains or tics. Parents feel the pressure of having to be available all the time, since they are expected to participate in doing school assignments and communicate with the teacher and other parents.

> *"Distance education requires constant use of computers/tablets/mobile phones/TV, which negatively affects my child's health. We all spend too much time in front of screens."*
>
> *"Excess of technology, constant tension from numerous Viber groups."*

5. Parents' fear of school failure

Parents mention that children often seek help with explaining content, and that they do not know how to explain the content in a way appropriate to their children. They notice that children do not understand the content, and that they fall behind or know less. Parents fear that quickly covering new content and moving on without revising it will result in children having gaps in their knowledge. Problems arise due to all of this, such as children's anger about not understanding the content, frustration at having to listen to parents' explanations, dissatisfaction with their own work, confusion and anxiety.

> *"I'm afraid my child might have permanent gaps in his/her knowledge, which will cause problems in further education."*
>
> *"Content changes too quickly. There are too many missed things that children will not be able to catch up with later in higher grades."*

6. Lack of teacher support

Parents mention the lack of teacher support, referring to teaching, availability, communication and giving feedback. They complain about content being insufficiently explained by the teacher, thus reducing learning to children solving tasks they do not understand on their own, without receiving feedback. Moreover, there is no direct communication between children and teachers. Teachers communicate only with parents.

> *"The child receives absolutely no materials that would help him/her solve tasks, but only the tasks that need to be completed."*
>
> *"Children have no classes, they just do tasks. The content is not explained and they have simply lost this year. The teacher is not committed enough, not interested, inaccessible and is almost never available for our questions."*

7. Overburdening with school tasks

As many as 11.89% of parents' comments refer to children being overburdened during distance learning. Parents notice their children require more time to solve tasks in distance learning than in face-to-face learning. Children are assigned a larger number of various tasks, which are very time demanding

"They have to independently learn the content that they would otherwise do at school, and have to do the homework in addition, which takes all day – every day and during the weekends."

"Now the child is required to spend more time on distance learning than was customary when going to school."

8. Outliers

This category comprises answers that have a low rate of occurrence and do not belong to any of the aforementioned categories.

"There are frequent quarrels between siblings, because they cannot both watch or do what they want simultaneously."

Discussion

The purpose of the study was to investigate parents' perceptions of the positive and negative sides of distance education during the Covid-19 pandemic.

The categories obtained show that parents observed positive and negative sides of distance education, which refer to children's learning, family relationships, relationships with others, ICT, involvement of teachers, and parental involvement in children's learning. Thus, the six categories that refer to positive aspects can be observed in contrast to the six categories referring to negative aspects of distance education. The analysis yielded a separate category *Overburdening with school tasks*, whose content unequivocally indicates the problems parents and their children encountered during distance education.

Overburdening with school tasks

Parents noticed an inadequacy regarding the difficulty of the content, the complexity of instructions, and the quantity of tasks for independent solving. Completing various tasks (e.g., creating posters, experiments, picture books, projects and artwork) requires a lot of time, and frequently involves materials that are not available to children or parents during lockdown. Since the participants were parents of six- to ten-year-old children (attending first to fourth grade of primary school), some of the children encountered such tasks for the first time during distant learning, and had not developed the knowledge and

the skills necessary to understand how to process and approach such tasks. The lack of procedural skills the children were supposed to have acquired earlier rendered the process of learning additionally difficult, as students had to acquire new content, as well as new methods and working techniques simultaneously.

In Croatia, a study was conducted on the experiences and satisfaction of students with online education in the seventh grade of primary school (IDIZ, 2020). The results demonstrated that the majority of the 973 students from the sample (71%) maintained that online education represented a higher burden in relation to traditional classroom education, due to the greater number of tasks they had to solve in a short period of time and the major effort required to solve the tasks. Although the research involved opinions of somewhat older students, these results are in harmony with the opinions of parents of younger students. In other words, the quantity and complexity of the tasks, as well as their degree of challenge in the online environment, is an important issue for further research in the Croatian educational context.

Developing self-regulated learning vs. Lack of interest in learning

Parents highlight the development of self-regulation in learning, which includes the development of students' independence and responsibility, the successful organisation of learning time, the successful realisation of learning outcomes, motivation, and the development of coping mechanisms for dealing with new situations. The importance of developing and sustaining a routine in learning and solving tasks despite the new situation is emphasised in other studies that investigate parents' perception of distance education (Bhamani et al., 2020; Romero et al., 2020). Taking responsibility for learning is considered to be the foundation for building working habits in the future.

On the other hand, some parents observe that due to distance education, their children have lost interest in and motivation for learning, and they do not take it as seriously as teaching and learning carried out in school. Comparable results were obtained by Garbe et al. (2020), who found that parents noticed a lack of learning motivation in children, which was specifically due to distance education. This lack of learning motivation may represent an additional, new challenge for teachers upon their return to school.

Improved quality of family relationships vs. Disrupted quality of family relationships

Parents recognise an improvement in the quality of family relationships as a positive consequence of distance education, which is consistent with the results obtained by Dong et al. (2020), who also identified an improvement

of the parent-child relationship during Covid-19 online education. Riffle et al. (2020) indicate the possibility of a positive shift in parent-child relationships in unexpected situations, showing that even in adverse situations, positive outcomes and personal growth can be observed. Brown et al. (2020) claim that isolation during the lockdown corresponded with parents spending more time with their children. Romero et al. (2020) maintain that social bonding was positively affected by what they call focused parenting. From their research it is also possible to assume that parents who show characteristics of focused parenting, such as a soothing attitude and providing emotional comfort for the child, recognised the positive characteristics of distance education, which contributed to an improved quality of family relationships. Negative features caused by distance education disrupting the quality of family relationships refer to confusion about known/present family roles, where the double role of parents in the process of education (parent and teacher) is particularly emphasised. Parents warn that their children express dissatisfaction and frustration because they think their parents "play the role of teacher", and for that reason they sometimes refuse cooperation. Garbe et al. (2020) have come to a similar conclusion and point out that parents have become surrogate teachers, which is not suitable for all children. Moreover, parents feel a high level of overburdening due to the quantity of time and effort they must invest in working with their child to enable him/her to follow online teaching. Parents who work from home emphasise the impossibility of fulfilling their professional obligations and reduced professional productivity. Those who go to work on a daily basis express their dissatisfaction with teachers not understanding the situation they found themselves in, which implies that they make up for children's obligations in the late afternoon and evening hours and during weekends, since the children cannot do their school tasks independently without their support. Similar challenges are emphasised by American parents, who point out that, for them, the additional responsibility during distance education resulted in a feeling of high pressure (Garbe et al., 2020).

Benefits of staying at home vs. Restriction of social contacts

Parents recognised both the advantages and disadvantages of staying at home during isolation. The benefits refer to a more pleasant learning atmosphere, but also to a better possibility of rest. On the other hand, parents claim that isolation reduced the social contacts that are so important for the social and emotional development of children. During the lockdown, parents became more aware of the role of school in the development of social and emotional competences of children, and of the potential consequences of the lockdown, to

which they had paid less attention earlier. These are the potential consequences for child mental health to which Loades et al. (2020) refer, emphasising that social isolation increases the risk of metal health problems like depression and anxiety after enforced isolation ends. Moreover, Bhamani et al. (2020, p. 17) point out that "Schools play a huge role in disciplining and polishing social skills; remote learning has taken away that opportunity from children. [...] Going to school is not only about subject learning, but also social relationship and peer to peer interaction along with developing social skills."

Meaningful use of ICT vs. Excessive use of ICT

Parents recognised the meaningful use of ICT for the purpose of learning. They mention new tools/applications that students had not used before (for example, Matific, Worldwall), and that now significantly help them with learning. They also mention the communication platforms (such as MS Teams or Zoom) used by students for conversations with teachers and peers. They emphasise the possibility of real-time communication as a particular benefit of these platforms.

Negative comments related to ICT use in distance education refer to the excessive use of technological gadgets (mobile phones, tablets, laptops) and the long hours their children spend in front of screens. It is interesting to mention that some parents observe that before the lockdown children frequently used digital equipment in their leisure time, and that now, combined with distance education, screen time has become alarmingly high, which is why some children have begun to develop health problems. Parents' concern regarding too much screen time is expressed in other research findings (Park & Winchester, 2020), including its negative influence on children's health, particularly on their sight (Dong et al., 2020).

Parental support in learning vs. Parents' fear of school failure

During distance education, parents in Croatia became more actively involved in their children's school obligations and learning. For the first time, some of them faced certain learning problems that their children encounter and perceived the kind of support their children need. Due to a higher level of involvement, parents noticed the strengths and weaknesses in the ways their children approach learning, and attempted to adapt their support to their needs.

Parents expressed concern about their own lack of time, about not being acquainted with the content and the methods they could use to explain appropriately to their children content that remained unclear in distance education. They fear that children will not be able to catch up on unachieved learning

outcomes once they return to school. They are also afraid that upon their return to school, the teachers will not check the achievement of the planned learning outcomes or provide additional compensation mechanisms for their fulfilment, which may result in failure in further education.

Teacher's involvement vs. Lack of teacher's support

Only 3.74% of the responses refer to the positive characteristics of teacher's work in distance education, which includes quality communication and adapting learning materials and tasks to students' needs and abilities. A significantly higher number of responses (9.03%) refer to the lack of adequate teacher support during distance education. Statements such as "*Teaching is not just assigning tasks, it is necessary to explain content and procedures beforehand*" are frequent, which means that some teachers see distance education as mere task-assigning for independent work, while other elements of teaching are absent. In Croatia, TV-school was provided for every grade for one hour per day, and it is probable that some teachers interpreted TV-education as "work in the classroom" and simply formulated additional assignments for students' independent work. Research carried out by Park and Winchester (2020) points to the same problem, warning that distance education fails to provide time for explanation and deeper understanding of concepts and procedures.

Limitations

The present study was carried out during the height of the Covid-19 pandemic crisis and during the national lockdown, hence there were significant limitations. The research was conducted by phone and online including parents who participated voluntarily. Thus, the sample is not representative. The sample included parents with higher than average education (58.4% higher education level) and those who are active on social networks. The questionnaire used in the research was constructed *ad hoc*, based on the researchers' familiarity with the context in which they live and the specific needs created by the new situation. Thus, the results of the study cannot be generalised, but can be used as a starting point for further research into parents' opinions on distance education using a representative sample, i.e., also including those categories of parents that were not included in this research. Furthermore, future research should use other methods of data collection (such as face-to-face interview techniques) and revise and expand the number of items in the interview.

Conclusions

The Covid-19 pandemic has caused drastic changes in people's lives worldwide, including Croatia. Restricted movement and, consequently, restrictions in performing everyday activities have resulted in powerful changes in the way of life as it had existed until that moment. The way of education changed overnight from the traditional school setting to a distance education setting. The implementation of distance education as the only form of teaching in primary education in pandemic conditions is a totally new experience, requiring scientific research. Besides students and teachers, parents are crucial stakeholders in the education process. Parents took over new roles in the teaching and learning process of their children not known until then. It is therefore important to understand their experiences and opinions about distance education.

The present study has shown that parents do not have black-or-white opinions on distance education, but notice both positive and negative elements influencing their children's learning, their family relationships, relationships with others, the use of new technologies, the teacher's role, and their own involvement in their children's education.

The difficulties Croatian parents faced in distance education have been identified in other research performed during the lockdown (Bhamani et al., 2020; Brown et al., 2020; Dong et al., 2020; Garbe et al., 2020; Park & Winchester, 2020; Romero et al., 2020). The main difficulties refer to a decrease in learning motivation, too much time spent on completing assignments, excessive use of digital technologies, parents taking over the teacher's role, disturbances in family relationships, and the lack of social contact with peers. These findings suggest the need to create recommendations for parents and teachers at different levels. At the policy level, clear recommendations are required for teachers, defining guidelines for distance teaching. It is particularly important that every school operationalise the policy-level guidelines according to the context in which it acts and make them available to all parents and the interested public. All of the teachers employed in each particular school should be included in creating guidelines at the school level. Guidelines for parents should be developed according to the same model. It is important that parents participate in creating the recommendations in order to ensure that their perspective and life context is respected. Clearly defined roles and expectations for teachers and parents would enable better mutual communication and reduce the possibility of the appearance of "blame the teacher" or "blame the parents" situations and would open space for cooperation that would eventually lead to achieving the desired educational outcomes for children.

References

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development, 67*(3), 1206–1222.

Bhamani, S., Makhdoom, A. Z., Bharuchi, V., Ali, N., Kaleem, S., & Ahmed, D. (2020). Home learning in times of COVID: Experiences of parents. *Journal of Education and Educational Development, 7*(1), 9.

Borup, J., West, R. E., Graham, C. R., & Davies, R. S. (2014). The adolescent community of engagement framework: A lens for research on K-12 online learning. *Journal of Technology and Teacher Education, 22*(1), 107–129.

Boulton, H. (2008). Managing e-learning: What are the real implications for schools? *The Electronic Journal of e-Learning, 6*(1), 11–18.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Brown, S. M., Doom, J. R., Lechuga-Peña, S., Watamura, S. E., & Koppels, T. (2020). Stress and parenting during the global COVID-19 pandemic. *Child Abuse & Neglect,* 104699. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7440155/

Callahan, K., Rademacher, J. A., & Hildreth, B. L. (1998). The effect of parent participation in strategies to improve the homework performance of students who are at risk. *Remedial and Special Education, 19*(3), 131–141.

Cassity, J., & Harris, S. (2000). Parents of ESL students: A study of parental involvement. *NASSP Bulletin, 84*(619), 55–62.

D'Ailly, H. (2003). Children's autonomy and perceived control in learning: A model of motivation and achievement in Taiwan. *Journal of Educational Psychology, 95*(1), 84–96.

Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 Pandemic: Chinese parents' beliefs and attitudes. *Children and Youth Services Review*, 105440. https://www.sciencedirect.com/science/article/abs/pii/S019074092031224X

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1–22.

Garbe, A., Ogurlu, U., Logan, N., & Cook, P. (2020). Parents' experiences with remote education during COVID-19 school closures. *American Journal of Qualitative Research, 4*(3), 45–65.

Government of the Republic of Croatia. (2020). Decision on suspending live teaching at universities, secondary and primary schools as well as institutions of pre-primary education and care and introducing distance online instruction. *Narodne novine*, 29/2020.

Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). Inner resources for school achievement: Motivational mediators of children perceptions of their parents. *Journal of Educational Psychology, 83*(4), 508–517.

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review

of consequences and mechanisms. *Annals of Behavioral Medicine, 40*(2), 218–227. https://doi.org/10.1007/s12160-010-9210-8

Hasler-Waters, L. (2012). *Exploring the experiences of learning coaches in a cyber-charter school: A qualitative case study* (Doctoral dissertation). University of Hawaii at Manoa. https://scholarspace.manoa.hawaii.edu/handle/10125/100883

Hill, N. E., & Taylor, L. C. (2004). Parental school involvement and children's academic achievement: Pragmatics and issues. *Current Directions in Psychological Science, 13*(4), 161–164.

Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., & Closson, K. (2005). Why do parents become involved? Research findings and implications. *The Elementary School Journal*, *106*(2), 105–130.

Institut za društvena istraživanja u Zagrebu. (2020, June 6). *Media report – Experiences and satisfaction of students with online education in the seventh grade of primary school.* https://www.srednja.hr/app/uploads/2020/06/Zadovoljstvo-i-iskustva-online-nastavom-7.-razred-IDIZ.pdf

Liu, F., Black, E., Algina, J., Cavanaugh, C., & Dawson, K. (2010). The validation of one parental involvement measurement in virtual schooling. *Journal of Interactive Online Learning, 9*(2), 105–132. https://www.learntechlib.org/p/109414/

Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., Linney, C., McManus, M. N., Borwick, C., & Crawley, E. (2020). Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry, 59*(11), 1218–1239.

Melhuish, E. (2010). Why children, parents, and home learning are important. In K. Sylva, E. Melhuish, P. Sammons, I. Siraj-Blatchford, & B. Taggart (Eds.), *Early childhood matters: Evidence from the effective preschool and primary education project* (pp. 44–59). Routledge.

Park, D., & Winchester, H. (2020). *Parents 2020/COVID-19 closures: A redefining moment for students, parents & schools.* Edge research. https://assets.documentcloud.org/documents/6895624/Learning-Heroes-Survey-Results.pdf

Paulson, S. E. (1994). Relations of parenting style and parental involvement with ninth-grade students' achievement. *Journal of Early Adolescence, 14*(2), 250–267.

Pećnik, N. (Ed.) (2013). *How parents and communities provide and care for young children*. UNICEF.

Riffle, O. M., Lewis, P. R., & Tedeschi, R. G. (2020). Posttraumatic growth after disasters. In S. Schulenberg (Ed.), *Positive psychological approaches to disaster* (pp. 155–167). Springer.

Romero E., López-Romero L., Domínguez-Álvarez B., Villar P., & Gómez-Fraguela J. A. (2020). Testing the effects of COVID-19 confinement in Spanish children: The role of parents' distress, emotional problems and specific parenting. *International Journal of Environmental Research and Public Health, 17*(19), 6975. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7578923/

Roy, M., & Giraldo-García, R. (2018). The role of parental involvement and social/emotional skills in academic achievement. Global perspectives. *School Community Journal, 28*(2), 29–46.

Seginer, R. (2006). Parents' educational involvement: A developmental ecology perspective. *Parenting: Science and Practice, 6* (1), 1–48.

Simpkins, S. D., Weiss, H. B., McCartney, K., Kreider, H. M., & Dearing, E. (2006). Mother-child relationship as a moderator of the relation between family educational involvement and child achievement. *Parenting: Science and Practice, 6*(1), 49–57.

Stevens, M., & Borup, J. (2015). Parental engagement in online learning environments: A review of the literature. *Exploring Pedagogies for Diverse Learners Online*, 99–119.

Tan, E. T., & Goldberg, W. A. (2009). Parental school involvement in relation to children's grades and adaptation to school. *Journal of Applied Developmental Psychology, 30*(4), 442–453.

Taylor, A. R., & Machida, S. (1994). The contribution of parent and peer support to Head Start children's early school adjustment. *Early Childhood Research Quarterly, 9*(3), 387–405.

UNESCO. (2020). *Global monitoring of school closures caused by COVID-19.* UNESCO. https://en.unesco.org/covid19/educationresponse

WHO. (2020, March 11). *Director General's opening remarks at the media briefing on COVID-19.* World Health Organisation. https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

WHO. (2020, March 13). *Director General's opening remarks at the media briefing on COVID-19.* https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-mission-briefing-on-covid-19---13-march-2020

Yung, C. F., Kam, K., Nadua, K. D., Chong, C. Y., Tan, N. W. H., Li, J., Lee, K. P., Chan, Y. H., Toon, K. C., & Chong Ng, K. (2020). Novel coronavirus 2019 transmission risk in educational settings. *Clinical Infectious Diseases*, *72*(6), 1055–1058 https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa794/5862649

Biographical note

Maja Drvodelić, PhD, is an Assistant Professor at the Department of Pedagogy and Didactics at the Faculty of Teacher Education University of Zagreb, Croatia. Her areas of scientific interests include quality of preschool and primary school education, teacher education, educational evaluation with a particular focus on preschool and primary school self-evaluation process.

Vlatka Domović, PhD, is a full professor at the Faculty of Teacher Education, University of Zagreb. Her research interests include: teacher education and training, educational administration, comparative education, and school effectiveness. Besides academic career she is committed to the transfer of her scholarship into educational policy projects, and she has been involved in development of programs for in – service teacher training especially in the field of curriculum development and school leadership.

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How the Covid-19 Pandemic was Experienced by Slovenian and German Adolescents with Specific Learning Difficulties

Karmen Javornik*[1], Marija Kavkler[2], Sven Lychatz[3] and Milena Košak Babuder[4]

The spring phase of the pandemic made the education of adolescents with specific learning difficulties (SpLD) challenging. In the present study, which included 122 adolescents with SpLD (50% from Slovenia, 50% from Germany), we investigated how Slovenian and German adolescents with SpLD perceived and solved some of the challenges of distance learning. The study data were collected with two online questionnaires (in Slovenian and German, respectively). Slovenian adolescents were statistically significantly more likely than German adolescents to mention problems with attention, the importance of multisensory learning, and the importance of being able to choose the time to learn, as well as psychosomatic problems. Slovenian adolescents had more experiences with praise from teachers during the pandemic and they also mentioned more issues with the transition to distance learning and the use of information and communication technology. Younger adolescents had more parental help. Male adolescents were more likely to report that they did not have the right spatial conditions for learning. German adolescents spent more time chatting on social media and experienced less support for learning. Female adolescents were more likely to express fear of the pandemic and a lack of learning support, while male adolescents across the sample missed their peers more. Most of the respondents came from families in which the pandemic did not cause serious material and spatial problems, but German adolescents were statistically significantly less likely to feel these consequences. According to the respondents, the spatial and material conditions were similar in both countries.

Keywords: adolescents, Covid-19, distance learning, pandemic, specific learning difficulties

1 *Corresponding Author. Faculty of Education, University of Ljubljana, Slovenia; karmen.javornik@pef.uni-lj.si.
2 Faculty of Education, University of Ljubljana, Slovenia.
3 Institute for Systemic – Integrative Learning Therapy, Germany.
4 Faculty of Education, University of Ljubljana, Slovenia.

Kako so pandemijo covida-19 doživljali slovenski in nemški mladostniki s specifičnimi učnimi težavami

Karmen Javornik, Marija Kavkler, Sven Lychatz in Milena Košak Babuder

V spomladanski fazi pandemije je bilo izobraževanje mladostnikov s specifičnimi učnimi težavami (SUT) zahtevno. V raziskavi, v kateri je sodelovalo 122 mladostnikov s SUT (50 % iz Slovenije, 50 % iz Nemčije), smo ugotavljali, kako slovenski in nemški mladostniki s SUT zaznavajo in rešujejo nekatere izzive učenja na daljavo. Raziskovalne podatke smo zbrali z dvema spletnima vprašalnikoma (v slovenskem oziroma nemškem jeziku). Slovenski mladostniki so statistično značilno pogosteje kot nemški navajali težave s pozornostjo, pomen multisenzornega učenja in možnosti izbire časa za učenje ter psihosomatske težave. Slovenski mladostniki so imeli več izkušenj s pohvalami učiteljev med pandemijo, omenjali pa so tudi več težav s prehodom na učenje na daljavo in uporabo informacijsko-komunikacijske tehnologije. Mlajši mladostniki so imeli več pomoči staršev. Mladostniki moškega spola so pogosteje poročali, da niso imeli ustreznih prostorskih pogojev za učenje. Nemški mladostniki so več časa preživeli ob klepetu na družbenih omrežjih in doživeli manj podpore pri učenju. Mladostnice so pogosteje izražale strah pred pandemijo in pomanjkanje podpore pri učenju, medtem ko so mladostniki v celotnem vzorcu bolj pogrešali vrstnike. Večina anketirancev je prihajala iz družin, v katerih pandemija ni povzročala resnih materialnih in prostorskih težav, vendar so nemški mladostniki statistično značilno redkeje občutili te posledice. Po mnenju anketirancev so bili prostorski in materialni pogoji v obeh državah podobni.

Ključne besede: mladostniki, covid-19, učenje na daljavo, pandemija, specifične učne težave

Introduction

The transition of education from the classroom to the home environment during the Covid-19 pandemic in 2020 brought many changes that we could not even have imagined in the past (Bubb et al., 2020). In Germany, distance learning was a significant challenge for students, teachers and parents, as attempts to continue distance learning as smoothly as possible with digital tools failed (Blume, 2020). German students were inadequately trained for distance learning, had insufficient information and communication technology (ICT), and did not all have equal access to distance learning. Distance learning revealed inequalities between students who had digital tools and those who did not. Although 90% of German adolescents own a smartphone (the proportion of younger adolescents with a smartphone ranges from 25% to 67%), this does not mean that they are proficient in ICT for distance learning, as they mainly used technology for leisure activities before the pandemic (Feierabend et al., 2018 cited in Blume, 2020). In addition, almost 10% of people in Germany did not have internet access (not only due to wealth, but as a result of inadequate infrastructure) (Blume, 2020). Most German teachers had low levels of ICT skills. Teachers complained that students were not proficient in using email (attaching documents, replying to emails), while parents complained that teachers required and used too many different tools and environments in distance learning, and employed materials that were merely digital versions of traditional worksheets adapted to the current situation (Koller et al., 2020 cited in Blume, 2020), thus creating a number of obstacles for students (Ibid.). Slovenian students faced similar challenges. In spring, there were almost 2,000 students without computers, some of whom still do not have sufficient internet access. Moreover, a large proportion of students did not have adequate computer skills for distance learning, as computer science is not a compulsory subject in primary school (Šprohar, 2020). Only 20% of teachers were very well trained for distance learning (Kuralt, 2020).

Slovenian and German adolescents aged 10 to 18 also participated in a comparative EU survey on distance learning in spring 2020, covering eleven countries (Vuorikari et al., 2020). The survey data (ibid.) show that both groups of adolescents devoted an average of 34–41% of the total time spent online to learning activities. Some 63% of the Slovenian adolescents surveyed perceived distance learning as more stressful than classroom learning, while 30–45% of the German adolescents perceived it as equally stressful to classroom learning. Of the 5.9 hours spent online, German adolescents engaged in 3.3 hours of school-related activities, while Slovenian adolescents devoted 3.8 hours of

the 6.7 hours spent online to school-related activities. In contact with teachers, videoconferencing tools were used by 60% of German adolescents and 94% of Slovenian adolescents. German adolescents and parents were more concerned about the negative effects of distance learning than Slovenian parents and adolescents. More than 75% of German parents had at least basic or more than basic skills in using ICT technology, compared to 68% of Slovenian parents. The financial situation of the participating German parents was better than that of the Slovenian parents. Based on all of the results, the authors suggested improving the ICT equipment of schools, training teachers in the use of ICT, developing a positive attitude towards the use of ICT, reducing the burden on parents, and finding new models of distance learning (Vuorikari et al., 2020).

In the international survey PISA 2018 (OECD, 2019), Germany and Slovenia are above the OECD average of 79 countries in all three forms of literacy, which shows that the learning performance of students with and without disabilities from both countries is similar at the international level. The results of our survey are therefore comparable between the two countries. German 15-year-olds scored higher in reading, while Slovenian 15-year-olds scored higher in mathematics and science. In science, less than 15% of Slovenian students scored below the second level. In mathematics and reading literacy, the performance of Slovenian adolescents was close to the second level limit. The proportion of German students scoring below the second level was slightly higher in all three forms of literacy. German 15-year-olds are more satisfied with their lives (67%) than Slovenian 15-year-olds (64%), and 92% of German 15-year-olds feel happy sometimes or always. In comparison, 65% of Slovenian 15-year-olds are equally happy, but 30% of Slovenian adolescents are always sad compared to only 4% of German adolescents (OECD, 2019).

Based on an analysis of the literature and data from Slovenian adolescents in PISA 2018, Markelj and Sember (2020) find that emotional support from parents is extremely important for adolescents' feelings of life satisfaction. The greatest predictors of life satisfaction in the school environment for Slovenian adolescents are a sense of greater belonging to the school, a lower perception and experience of violence, support from teachers during lessons, precise guidelines for work, and formative feedback. Boys are significantly more satisfied with life than girls; this difference among Slovenian participants is one of the largest in the participating countries of PISA 2018 (Markelj & Sember, 2020).

Di Pietro et al. (2020) point out the multiple effects of the pandemic on school-age youth. Academic performance declined because students spent less time studying in distance learning than in school and experienced more stress and anxiety, which negatively impacted academic performance. Lacking

face-to-face contact with peers and teachers, students were less motivated and less engaged in their schoolwork. The lack of social contact with peers and teachers will have far-reaching socio-emotional consequences for individuals' behaviour and mental health. The impact of these factors on adolescents from families with lower socioeconomic status is even more significant, as they have more inadequate material conditions and less help and support from their parents (Di Pietro et al., 2020).

In a large comparative study of the performance of 8,000 third- to eighth-grade students in 2019, Kuhfeld et al. (2020) found that distance education had a significantly greater negative impact on mathematics performance than on reading performance. Students had significantly smaller achievement gaps in reading than in mathematics. The researchers hypothesised that reading performance was better because students read more independently and because parents found it easier to help children with reading difficulties than those who struggled with mathematics. In mathematics, on the other hand, the results were concerning because students scored 5–10 percentile lower in the spring of 2020 than they did in 2019 (Kuhfeld et al., 2020).

For parents, distance learning presents a great challenge, as the new role has given them many new responsibilities (Horowitz & Igielnik, 2020), which are assumed to be even more extensive and demanding when working with adolescents with severe specific learning difficulties (SpLD), who have diverse special needs. These students often do not have the necessary skills to use ICT; they need structure, more help and support because it is more difficult for them to concentrate on the required tasks for an extended period of time. For adolescents with SpLD who are sufficiently computer literate, however, the use of ICT reduces the impact of learning deficits and enables them to better adjust their pace and way of working.

Individuals with a more severe form of SpLD[5] are those who, due to known or unknown disorders or differences in brain function, have difficulties in reading, writing, spelling and/or arithmetic, despite having average or above-average intellectual abilities (in Germany, with an IQ above 70). In the learning environment, they have special needs in terms of organisation, motor skills, social integration and education (Lewis & Doorlang, 1987 cited in Kavkler, 2011). Educational needs resulting from impaired psychological processes such as attention,

5 The term "Specific Learning Difficulty" (SpLD) refers to a difference or difficulty in certain aspects of learning. The most common SpLDs are dyslexia, dyspraxia, dyscalculia, dysgraphia and attention deficit/ hyperactivity disorder (ADHD). A person may have one of these disorders independently, or they may coexist as part of a broader profile. SpLDs exist on a continuum from mild to moderate to severe. There are common patterns of behaviour and ability, but in each person there are a range of different patterns of effect (BDA – British Dyslexia Association, n. d.; Helen Arkell Dyslexia Centre, n. d.; The Dyslexia Association, n. d.).

memory, language processing, social cognition, perception, coordination, temporal and spatial orientation, and information organisation have the most significant impact on the academic performance and inclusion of adolescents with SpLD (Magajna et al., 2014). These impairments are present to such an extent that there are very significant differences between the adolescent's actual abilities, on the one hand, and the quality and quantity of knowledge representation, on the other (Thomson, 2007). The disruption of these psychological processes also conditions the special needs of adolescents with SpLD in the area of work organisation and planning (weaker organisational skills), as well as in the motor and socio-emotional areas. Due to their poorer social integration skills, they have difficulties integrating into the social environment, as it is more difficult for them to understand rules, social relationships, non-verbal signs of social messages, etc. Adolescents with SpLD often suffer from emotional distress and problems with poor learning performance (Lithari, 2019; Long et al., 2007; Mikuš Kos, 2017), loss of self-confidence and lowered self-esteem, sensitivity to criticism and alienation from peers (Ott, 1997; O'Brien, 2020), as well as the frustration, shame and depression that can result from not recognising the problems or not receiving adequate support (Mikuš Kos, 2017). In adolescents, SpLDs are often associated with an ADHD disorder. As neurologically based disorders, SpLD and ADHD impair the effectiveness of reading, writing, mathematics, organisation, listening comprehension, social skills, motor skills or a combination thereof (Horowitz et al., 2017). The co-occurrence of SpLD and ADHD has the effect of increasing the special needs of children and adolescents. In the United States, this co-occurrence is present in one in five children and adolescents (Horowitz et al., 2017).

In the general population, the estimated prevalence rate of school-aged adolescents with SpLD is 5–15% (APA, 2013). In Germany and Slovenia, there are no exact statistics on the number of students with SpLD. For Slovenia, the only data available is that 3% of students in primary schools (MIZŠ, 2020a) and 3.75% of students in secondary schools have severe SpLD (MIZŠ, 2020b). In Slovenia, adolescents with severe SpLD are defined as children with special needs (Magajna et al., 2014). The systems of treatment and interventions for students with SpLD also differ in the two countries. In both Germany and Slovenia, there are no representative surveys of the performance of students with SpLD, but in both countries they are often among those who perform lower on average than their peers without SpLD. Most students with severe SpLD need a lot of social and emotional support, understanding of their needs and time for adjustments in order to show their abilities and knowledge.

Since many adolescents with SpLD were found by NCLD (2020) to lack sufficient access to quality individualised instruction and additional

professional support, adequate parental support, appropriate ICT and other material conditions during the pandemic, they experienced even greater social and emotional distress than they would have otherwise and more than peers. Anxiety and social isolation presented a barrier that further impacted learning concentration, which will have a long-term impact on the educational success of these students (NCLD, 2020). The impact of these factors will be mitigated if teachers provide them with the necessary integrated socio-emotional and educational support, taking into account their strengths (NCLD, 2020). Students will need to be involved in the preparation and implementation of activities to overcome the consequences of Covid-19, so that change is inclusive and focused on children and adolescents to empower them to make the necessary changes (Cuevas-Parra & Stephano, 2020).

Garcia and Weiss (2020) point out that while we cannot predict exactly how the pandemic will affect the needs of the school population and its educational attainment in the future, we can conclude from existing research that the consequences will be far-reaching for all and especially for at-risk groups. Therefore, after the return to schools, the school system should be redesigned to reduce the negative socio-emotional and educational consequences of the pandemic and to restore the quality of education for all students.

Research Problem and Research Questions

After the distance learning experience in spring, we asked Slovenian and German adolescents with SpLD about how the Covid-19 pandemic had changed their lives and affected their plans. We were interested in whether they felt lonely, whether this period was stressful for them, what their learning needs were, and how the home and school environment met their needs.

The main aim of the study was to identify differences between adolescents with SpLD by country, age group and gender. In this paper, we present only part of the data from a broader study; specifically, the part concerning perceptions of the impact of distance learning on adolescents with SpLD. We focus on adolescents' self-perceptions and perceptions of educational needs, as well as on the impact of the pandemic and thus of distance learning in the emotional, social and educational domains, and on material and spatial conditions at home.

According to the research problem, the following research questions were formed:

RQ1: What are the differences in the self-perceptions and perceptions of the educational needs of adolescents by country, age group and gender?

RQ2: What are the differences in experiencing the consequences of the pandemic in the emotional and social domain by country, age group and gender?
RQ3: What are the differences in experiencing the consequences of the pandemic in education by country, age group and gender?
RQ4: How do material and spatial conditions during the pandemic differ by country, age group and gender?

Method

Participants

A total of 122 (100%) adolescents participated in the study, 61 (50%) were from Slovenia and 61 (50%) from Germany. The sample included 49 (40.2%) male adolescents (33 (27.0%) from Slovenia and 16 (13.2%) from Germany) and 73 (59.8%) female adolescents (28 (23.0%) from Slovenia and 45 (36.8%) from Germany). The adolescents were divided into two age groups. In the age group from 12 to 14 years there were 67 (55.3%) adolescents in the sample (34 (28.1%) from Slovenia and 33 (27.2%) from Germany), and in the age group from 15 to 18 years there were 54 (44.7%) adolescents (26 (21.5%) from Slovenia and 28 (23.2%) from Germany). One person from Slovenia did not provide information on his age. Below, the sample is presented according to the type of SpLD present among the adolescents (multiple answers were possible).

Table 1
Description of the sample by type of SpLD

	Reading difficulties	Writing difficulties	Arithmetic difficulties	Attention difficulties	Problems with the organisation of learning	Combined difficulties	Other
Yes (f)	37	31	76	51	36	24	8
Yes (%)	30.3%	25.4%	62.3%	41.8%	29.5%	19.7%	6.6%
No (f)	85	91	46	71	86	98	114
No (%)	69.7%	74.6%	37.7%	58.2%	70.5%	80.3%	93.4%
Total (f)	122	122	122	122	122	122	122
Total (%)	100%	100%	100%	100%	100%	100%	100%

Table 1 shows that the majority (62.3%) of the adolescents included in the study have arithmetic difficulties, and the fewest (6.6%) have other difficulties, such as Asperger's syndrome, dyslexia, foreign language difficulties, autism or ADHD. Three respondents ticked the item Other but did not specify the nature of the problem.

Instruments

The data were collected using the same online questionnaire[6] in two language versions: Slovenian and German. The questionnaire contained twelve questions, but according to the content of the present article we will only focus on seven questions: three questions provided basic information about the respondents (gender, age and type of deficits identified through a formal diagnostic procedure), while the other four questions related to the adolescent's self-perceptions and perceptions of their educational needs, the consequences of the pandemic in the emotional, social and educational domains, and the material and spatial conditions. Each of the latter four questions contained multiple items. For each item, the adolescents indicated the extent to which the item was valid to them, or the extent to which they agreed with it, on a four-point scale (e.g., 1 – not valid at all/ strongly disagree, 2 – mostly not valid/disagree, 3 – mostly valid/agree and 4 – always valid/strongly agree).

Research Design

Adolescents with SpLD were invited to complete the questionnaire via parents and professionals involved in the Bravo Association[7] from Ljubljana. The questionnaire was accessed via a web link. Initially, the questionnaire was completed by Slovenian adolescents with SpLD, and a little later we included adolescents from the German Institute for students with SpLD[8] from Leipzig, led by Dr Sven Lychatz. The German adolescents with SpLD completed a German version of the same online questionnaire. The Slovenian adolescents completed the questionnaire from 1 September to 1 November 2020, and the German adolescents completed it from 20 September to 1 November 2020. Participation was voluntary and anonymous.

The collected data are presented with frequencies (f) and proportions (%), and the Mann-Whitney U test (U) and Spearman correlation coefficient (ρ) are also used. Only the results that are statistically significant are presented.

Results

The results of the research will be presented in four groups: (1) self-perceptions and perceptions of the educational needs of adolescents (problems with attention, learning performance and emotional factors), (2) consequences

6 Prior to online publication, the linguistic and reading complexity of the questionnaire was reviewed by experts in specific learning difficulties, and it was piloted by some adolescents with SpLD.

7 Bravo Association – Association for Helping Children and Adolescents with SpLD, Ljubljana.

8 Institute for Systemic-Integrative Learning Therapy, Leipzig.

of the pandemic in the emotional and social domain, (3) consequences of the pandemic in education, and (4) material and spatial conditions at home.

Statistically significant differences between countries and some statistically significant correlations between individual items in each country are presented below in each section. Statistically significant differences by gender and age are also presented.

Self-perceptions and perceptions of the educational needs of adolescents

Table 2

Mann-Whitney U test to determine differences between countries in the items related to self-perceptions and perceptions of the educational needs of adolescents

	Item	Country	*N*	*R*	*U*	*z*	*p*
I1	I find it difficult to concentrate on schoolwork.	Slovenia	61	70.34	1321.000	-2.976	**.003**
		Germany	61	52.66			
I2	While sitting, I cannot sit still on a chair.	Slovenia	61	**70.92**	1286.000	-3.052	**.002**
		Germany	61	52.08			
I3	My parents constantly force me to work for school.	Slovenia	61	**73.43**	1132.500	-3.908	**.000**
		Germany	61	49.57			
I4	I need more breaks to do my schoolwork.	Slovenia	61	**74.43**	1072.000	-4.227	**.000**
		Germany	61	48.57			
I5	I prefer to learn much more when the teacher praises me for a job well done.	Slovenia	61	**75.16**	1027.000	-4.494	**.000**
		Germany	61	47.84			
I6	I learn more when pictures are added to the text.	Slovenia	61	**79.66**	753.000	-5.890	**.000**
		Germany	61	43.34			
I7	I learn more when I listen to subject content (teacher's explanation, someone reads to me, I listen to recordings of the explanation, etc.).	Slovenia	61	**78.86**	801.500	-5.722	**.000**
		Germany	61	44.14			
I8	I like to set my own time for my schoolwork.	Slovenia	61	**69.20**	1391.000	-2.529	**.011**
		Germany	61	53.80			
I9	When I work for school, I often feel distress, my stomach hurts, my head hurts, etc.	Slovenia	61	69.73	1358.500	-2.735	**.006**
		Germany	61	53.27			

Table 2 shows that in the items from I1 to I4, the Slovenian adolescents described problems with attention more statistically significantly.

In the following, the statistically significant correlations between the individual items (items from the domain of attention problems are compared with items from the other domains of the questionnaire) are presented by country. Among the Slovenian adolescents, their difficulty in concentrating on

schoolwork is statistically significantly related to their need for more breaks to complete their schoolwork (ρ = .541; p = .000) and to the belief that parents constantly force them to work for school (ρ = .409; p = .001). The Slovenian adolescents' belief that parents constantly force them to work for school is statistically significantly related to the item that they needed more help from their parents (ρ = .428; p = .001). All correlations are positive and moderate.

Among the Slovenian adolescents, their preference for order in their schoolwork is statistically significantly related to their difficulty in concentrating on schoolwork (ρ = -.465; p = .000) and constant pressure from parents to work for school (ρ = -.505; p = .000). Both correlations are negative and moderate.

For all items from I5 to I8 (Table 2), which refer to the domain of learning success, the Slovenian adolescents rated themselves statistically significantly higher than the German adolescents. Thus, it can be seen that the Slovenian adolescents are more motivated by the teacher's praise, and they perceive the greater importance of multisensory teaching and flexibility in the organisation of time for school obligations. There were statistically significant differences between the two countries on item I9, with the Slovenian adolescents reporting more psychosomatic problems.

In the following, the statistically significant correlations between the individual items (items from the domain of learning success are compared with items from the other domains of the questionnaire) are presented by country. In the German adolescents, the feeling of having psychosomatic problems when working for school is statistically significantly related to the belief that parents constantly force them to work for school (ρ = .273; p = .033). The same item is statistically significantly related to the Slovenian adolescents' belief that they try hard but still do not succeed (ρ = .260; p = .043) and that they need more breaks during school work (ρ = .334; p = .008). All correlations are positive and weak.

Table 3

Mann-Whitney U test to determine age differences between groups in the items related to self-perceptions and perceptions of the educational needs of adolescents

	Item	Group by age	*N*	*R*	*U*	*z*	*p*
I8	I like to set my own time for my schoolwork.	Younger	67	55.37	1432.000	-2.070	**.038**
		Older	54	**67.98**			
I10	I like order in my schoolwork.	Younger	67	54.62	1381.500	-2.402	**.016**
		Older	54	**68.92**			
I11	I need the help of my parents to do schoolwork.	Younger	67	**71.22**	1124.000	-3.746	**.000**
		Older	54	48.31			

In the group of items from the domain of self-perceptions and perceptions of educational needs of adolescents, when statistically significant differences by age are considered (Table 3), it appears that older adolescents statistically significantly prefer to set their time for schoolwork and that they are statistically significantly more likely to like order in their schoolwork than younger adolescents. Younger adolescents are statistically significantly more likely to report needing parental help with schoolwork than older adolescents.

When checking for gender differences within this group of items, we find statistically significant differences in the item that parents constantly force them to work for school (U = 1240.000; z = -3.003; p = .003). Male adolescents (R = 72.69) rated this item statistically significantly higher than female adolescents (R = 53.99). There are also statistically significant differences between genders for the item that they did not often have all of the learning materials (U = 1436.000; z = -1.976; p = .048). This item is rated statistically significantly higher by male adolescents (R = 68.69) than by female adolescents (R = 56.67). Male adolescents (R = 74.46) also rated higher than female adolescents (R = 52.80) on the item that they learn more when they listen to subject content (U = 1153.500; z = -3.499; p = .000). Looking at the differences between genders, statistically significant differences also appear for the item that they like order in their schoolwork (U = 1096.500; z = -3.898; p = .000), with female adolescents (R = 70.98) rating this item statistically significantly higher than male adolescents (R = 47.38).

The consequences of the pandemic in the emotional and social domain

Table 4

Mann-Whitney U test to determine differences between countries in the items related to the consequences of the pandemic in the emotional and social domain

	Item	Country	*N*	*R*	*U*	*z*	*p*
I12	I spent a lot of time alone in my room, playing games, chatting on social networks, etc.	Slovenia	61	53.60	1378.500	-2.563	**.010**
		Germany	61	**69.40**			
I13	I missed talking and playing in person with friends.	Slovenia	61	**77.28**	898.000	-5.126	**.000**
		Germany	61	45.72			

Table 4 shows that there are statistically significant differences between countries when it comes to spending a lot of time alone in one's room (I12), with the German adolescents rating themselves statistically significantly higher than

the Slovenian adolescents. The Slovenian adolescents miss talking and playing in person with friends (I13), rating themselves statistically significantly higher than the German adolescents on this item.

Table 5

Mann-Whitney U test to determine age differences between groups in the items related to the consequences of the pandemic in the emotional and social domain

	Item	Group by age	*N*	*R*	*U*	*z*	*p*
I12	I spent a lot of time alone in my room, playing games, chatting on social networks, etc.	Younger	67	55.07	1411.500	-2.153	**.031**
		Older	54	**68.36**			
I14	Sometimes I got afraid of quarantine or the consequences of Covid-19 and had a feeling of suffocation.	Younger	67	54.60	1380.500	-2.429	**.015**
		Older	54	**68.94**			

Table 5 shows that there are statistically significant differences between age groups. It can be seen that older adolescents spent more time alone in their room, playing games and chatting on social media, and reported that they were more likely to be afraid of quarantine or the consequences of Covid-19 and had a feeling of suffocation.

Looking at the differences between genders, we find that there are statistically significant differences in the item that they are afraid of quarantine or the consequences of Covid-19 and have a feeling of suffocation (U = 1342.000; z = -2.539; p = .011), with female adolescents (R = 67.62) rating themselves statistically significantly higher on this item than male adolescents (R = 52.39). Male adolescents (R = 70.57) rated themselves higher than female adolescents (R = 55.41) on whether they miss talking and playing with friends in person (U = 1344.000; z = -2.414; p = .016).

The consequences of the pandemic in education

Table 6

Mann-Whitney U test to determine differences between countries in the items related to the consequences of the pandemic in education

	Item	Country	*N*	*R*	*U*	*z*	*p*
I15	I had problems with the transition to distance learning and a different way of working.	Slovenia	61	**67.94**	1467.500	-2.084	**.037**
		Germany	61	55.06			
I16	I had problems managing technical devices and programs (computer, tablet, smartphone, etc.).	Slovenia	61	**73.25**	1143.500	-3.930	**.000**
		Germany	61	49.75			
I17	I received more praise from teachers.	Slovenia	61	**67.66**	1485.000	-1.989	**.047**
		Germany	61	55.34			
I18	On several occasions, I had individual encouragement from teachers (by phone, email, Zoom, MS Teams, etc.) to do schoolwork.	Slovenia	61	**71.75**	1235.000	-3.347	**.001**
		Germany	61	51.25			
I19	I was often in great distress because I could not solve the tasks, but I had no help.	Slovenia	61	52.30	1299.500	-3.000	**.003**
		Germany	61	**70.70**			

From Table 6, it can be seen that there are statistically significant differences between the two countries on the above items. For all of the items except the item that they were often in great distress because they could not solve the tasks but had no help (I19), the Slovenian adolescents rated themselves statistically significantly higher than the Germans, but for item I19 the German adolescents rated themselves statistically significantly higher.

In the following, the statistically significant correlations between the individual items (items from the domain of consequences of the pandemic in education are compared with items from the other domains of the questionnaire) are presented by country. For the Slovenian adolescents, problems with the transition to distance learning and a different way of working were statistically significantly related to their problems with using technical devices and programs (ρ = 0.394; p = .002), too little feedback from the teacher about their learning performance (ρ = 0.378; p = .003), and a lack of face-to-face conversations and games with friends (ρ = 0.320; p = .012). All correlations are positive and weak.

The adolescents' problems with the transition to distance learning and a different way of working are statistically significantly related to a lower willingness to work for school (ρ = 0.618; p = 0.000) among the Slovenian adolescents,

and to the feeling of often being very desperate because they could not solve the tasks and had no help among both the Slovenian (ρ = .418; p = .001) and the German adolescents (ρ = .383; p = .002). All correlations are positive and weak (.20 < ρ < .40) or moderate (.40 < ρ < .70).

Among the German adolescents, problems managing technical devices and programs are statistically significantly related to poor material conditions for learning when they did not have their own computer, internet, smartphone, etc. (ρ = .282; p = .028). The correlation is positive and weak.

Table 7

Mann-Whitney U test to determine age differences between groups in the items related to the consequences of the pandemic in education

	Item	Group by age	*N*	*R*	*U*	*z*	*p*
I16	I had problems managing technical devices and programs (computer, tablet, smartphone, etc.).	Younger	67	55.00	1407.000	-2.246	**.025**
		Older	54	**68.44**			
I20	I had more parental help.	Younger	67	**68.66**	1296.000	-2.786	**.005**
		Older	54	51.50			
I21	I had several problems with the organisation of learning (schedule, order, timing of obligations etc.).	Younger	67	54.66	1384.500	-2.291	**.022**
		Older	54	**68.86**			
I22	I received too little teacher feedback on learning performance.	Younger	67	54.93	1402.000	-2.194	**.028**
		Older	54	**68.54**			
I23	I had no additional professional help.	Younger	67	55.05	1410.500	-2.150	**.032**
		Older	54	**68.38**			

In determining the differences between younger and older adolescents (Table 7), we find that younger adolescents had statistically significantly more parental help than older adolescents. Older adolescents, on the other hand, rated themselves statistically significantly higher than younger adolescents on all items in Table 7 except item I20.

Examining the differences between genders, we find that there are statistically significant differences on the item that they were often very distressed because they could not solve the tasks and had no help (U = 1382.500; z = -2.214; p = .027), with female adolescents (R = 67.06) rating themselves statistically significantly higher than male adolescents (R = 53.21). There were also statistically significant differences between genders on the item that parents always force them to study (U = 1310.500; z = -2.660; p = .008), with male adolescents

(R = 71.26) rating themselves statistically significantly higher than female adolescents (R = 54.95). Statistically significant differences between genders are also evident in the item about more parental help (U = 1278.500; z = -2.776; p = .006), with male adolescents (R = 71.91) rating themselves statistically significantly higher than female adolescents (R = 54.51). Statistically significant differences between genders are also evident in the item of not having good spatial conditions for learning (U = 1500.000; z = - 2.079; p = .038), with male adolescents (R = 67.39) rating themselves statistically significantly higher than female adolescents (R = 57.55).

Material and spatial conditions at home

Table 8

Mann-Whitney U test to determine differences between countries in the items related to material and spatial conditions at home

	Item	Country	*N*	*R*	*U*	*z*	*p*
I24	I did not feel any financial problems due to the Covid-19 quarantine.	Slovenia	61	54.02	1404.000	-2.450	**.014**
		Germany	61	**68.98**			
I25	I did not have good spatial conditions for learning (I did not have my own corner where I could study, a study room, there was no peace, etc.).	Slovenia	61	61.50	1860.500	.000	1.000
		Germany	61	61.50			
I26	I did not have good material conditions for learning (I did not have my own computer, internet, smartphone, etc.).	Slovenia	61	60.25	1784.500	-.582	.561
		Germany	61	62.75			

In Table 8, we see that there are statistically significant differences between the two countries in I24. The German adolescents rate themselves statistically significantly higher than the Slovenian adolescents when it comes to not feeling any financial problems due to the Covid-19 quarantine. Items I25 and I26 show that there were no statistically significant differences between the two countries in reporting that the adolescents did not have good spatial or material conditions for learning. According to the opinion of the adolescents, the spatial and material conditions were similar in both countries.

In the following, the statistically significant correlations between the individual items (items from the domain of material and spatial conditions at home are compared with items from the other domains of the questionnaire) are presented by country. Among the German adolescents, the belief of not feeling any financial problems due to quarantine is statistically significantly

related to fewer adjustments of texts, explanations, instructions, pace of work by teachers (ρ = .301; p = .018). The correlation is positive and weak.

Discussion and Conclusion

Due to various deficits, adolescents with SpLD belong to the at-risk group of adolescents who might have more pronounced problems in distance learning and social integration compared to their peers. We therefore wanted to investigate the opinions of Slovenian and German adolescents about how they perceive themselves and their educational needs, how they perceive the consequences of distance learning in the educational and socio-emotional domain, and what material and spatial conditions they had at the time of the pandemic. As part of the first research question, we were interested in how Slovenian and German adolescents perceive themselves and their educational needs in general.

Compared to German adolescents, Slovenian adolescents statistically significantly emphasised attention problems, stressed the importance of multisensory learning, the positive impact of the teacher's praise on learning motivation, the positive impact of the possibility of choosing a school schedule, as well as psychosomatic problems. As the co-occurrence of SpLD and ADHD increases the special needs of children and adolescents (Horowitz et al., 2017), their needs may be present to such an extent that we observe very obvious differences between the adolescent's actual abilities, on the one hand, and the quality and quantity of knowledge, on the other (Thomson, 2007). We found that younger adolescents are statistically significantly more likely to need parental help, while older adolescents are statistically significantly more likely to determine their own time for performing school obligations and to have order in school work.

Male adolescents were statistically significantly more likely than females to report that their parents constantly forced them to study, that they often did not have all of the learning materials, and that they learned more when they heard the school materials. Female adolescents were statistically significantly more likely than male adolescents to report that they like order in school work. Our results show that there is a link between German adolescents' psychosomatic problems with SpLD and their parents' constant pressure to work for school. Nusser (2021) found that parents of students with special needs are more likely overall to provide parental support during distance learning, but it remains unclear whether parental support was of good quality and thus effective, or whether it was perhaps insufficient and resulted in increased learning

time for students with SpLD. In Slovenian adolescents, however, there is a significant correlation between psychosomatic problems and feelings of failure despite constant effort and the need for more breaks. Since many adolescents with SpLD did not have sufficient access to quality individualised instruction and additional professional help, adequate parental support, appropriate ICT, and other material conditions during the spring pandemic, they experienced even greater socio-emotional stress than usual and greater than peers (NCLD, 2020).

In the context of the second research question, we were interested in the consequences of the pandemic experienced by adolescents in the emotional and social domain. German adolescents were statistically significantly more likely than Slovenian adolescents to report that they spent a lot of time in their room, playing games and chatting on social networks. Similarly, in a study by Cauberghe et al. (2021), the majority of adolescents reported increased use of social media during lockdown, which proved to be the most useful active coping strategy for self-regulating mood during that time. Social media use mitigated their feelings of distress and anxiety to some extent and increased their feelings of happiness (Cauberghe et al., 2021). Slovenian adolescents, on the other hand, were statistically significantly more likely to miss talking and playing in person with friends than German adolescents. A study by Potrč et al. (2020), conducted on a sample of Slovenian primary and secondary school students with no special educational needs, found that primary school students needed communication during the lockdown, but that secondary school students did not particularly miss communication (Potrč et al., 2020). Female adolescents were statistically significantly more afraid of quarantine and the consequences of Covid-19 and had a feeling of suffocation, while male adolescents were statistically significantly more likely to miss face-to-face conversation and playing with friends. Some research conducted on Covid-19 (cited in Loades et al., 2020) has shown that loneliness is more strongly associated with increased depressive symptoms in girls and increased social anxiety in boys. Similarly, a study by Forte et al. (2021) found that girls over the age of 14 were more likely to experience sadness and boredom and more likely to be anxious. Older adolescents spent statistically significantly more time in their room, playing games and chatting on social media compared to younger adolescents, and were more likely than younger adolescents to report experiencing severe distress due to quarantine and fear of the consequences of Covid-19. Anxiety and social isolation presented a barrier that further impaired learning concentration, which in turn will impact their educational success in the long term (NCLD, 2020). Most people with SpLD need a lot of socio-emotional support, understanding of their needs, and time to adapt in order to show their skills and knowledge.

A lack of social contact with peers and teachers will have far reaching socio-emotional consequences on an individual's behaviour and mental health (Di Pietro et al., 2020; Laslo-Roth et al., 2020; Zhang et al., 2020).

For the third research question, we were interested in how adolescents experienced the consequences of the pandemic in education. Distance learning was stressful and affected the performance of both German and Slovenian adolescents. We find that Slovenian adolescents had statistically significantly more problems with the transition to distance learning and with the use of ICT than German adolescents, which is also evident from EU survey data (Vuorikari et al., 2020). At the same time, Slovenian adolescents received statistically significantly more praise and individual encouragement from teachers than German adolescents. Letzel et al. (2020 cited in Nusser, 2021) find that longer learning times for students with special educational needs are related to teachers not providing appropriate learning materials and tasks for students with different learning profiles, which is also related to our findings.

German adolescents were statistically significantly more likely than Slovenian adolescents to state that they were in great distress because they could not solve their tasks but had no help. There was also an important gender difference in this item, as female adolescents were statistically significantly more likely than male adolescents to report being in great distress because they could not solve their tasks and had no help. Male adolescents, however, were statistically significantly more likely than female adolescents to report that their parents kept forcing them to study, that they had more parental help, but that they did not have good spatial conditions for learning. Younger adolescents had statistically significantly more parental help than older adolescents. However, older adolescents estimated that they had statistically significantly more problems with ICT management and organisation of learning, that they received too little teacher feedback on learning performance, and that they had less additional professional help. We assume that parents and teachers expected older adolescents to be more independent in their work for the school. However, because adolescents did not have personal contact with peers and teachers, they were less motivated and engaged in fulfilling school responsibilities (Di Pietro et al., 2020).

Many studies related to the consequences of the pandemic also emphasise the impact of material and spatial conditions at home on adolescent learning. In the context of the fourth research question, we were interested in the material and spatial conditions at home during the pandemic. The results of our research show that a statistically significantly higher number of German adolescents than Slovenian adolescents stated that they did not feel any financial problems due to the Covid-19 quarantine, which is also in line with the results

of the study by Vuorikari et al. (2020). However, there are no statistically significant differences between the countries in terms of the items on spatial and material conditions for learning, so we can conclude that spatial and material conditions are similar among adolescents in both countries. Poorer material conditions of families affect the material conditions for learning, and indirectly affect the quantity and quality of help and support from parents and the socio-emotional distress of the adolescent (Di Pietro et al., 2020).

Although we cannot predict exactly how the pandemic will affect the needs of school populations and their educational outcomes in the future, we can conclude from existing research that the consequences will be far-reaching for all and especially for at-risk groups (Garcia & Weiss, 2020). Intensive and specific educational and socio-emotional forms of help and support will have to be organised for children and adolescents with SpLD so that they can develop their potential.

References

APA - American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed). American Psychiatric Association.

BDA – British Dyslexia Association. (n. d.). *Neurodiversity and co-occurring differences*. https://www.bdadyslexia.org.uk/dyslexia/neurodiversity-and-co-occurring-differences

Blume, C. (2020). German teachers' digital habitus and their pandemic pedagogy. *Postdigital Science and Education*, *2*(3), 879–905.

Bubb, S., & Jones, M. A. (2020). Learning from the COVID-19 home-schooling experience: Listening to pupils, parents/carers and teachers. *Improving Schools*, *23*(3), 209–222.

Cauberghe, V., Van Wesenbeeck, I., De Jans, S., Hudders, L., & Ponnet, K. (2021). How adolescents use social media to cope with feelings of loneliness and anxiety during COVID-19 lockdown. *Cyberpsychology, Behavior, and Social Networking*, *24*(4), 250–257.

Cuevas-Parra, P., & Stephano, M. (2020). *Children's voices in times of COVID-19: Continued child activism in the face of personal challenges.* World Vision International.

Di Pietro, G., Biagi, F., Costa, P., Karpiński, Z., & Mazza, J. (2020). *The likely impact of COVID-19 on education: Reflections based on the existing literature and recent international datasets* (Vol. 30275). Publications Office of the European Union.

Forte, A., Orri, M., Brandizzi, M., Iannaco, C., Venturini, P., Liberato, D., ... & Monducci, E. (2021). "My life during the lockdown": Emotional experiences of European adolescents during the COVID-19 crisis. *International Journal of Environmental Research and Public Health, 18*(14), 7638.

Garcia, E., & Weiss, E. (2020). *COVID-19 and students performance, equity and U.S. education policy. Lessons from pre-pandemic research to inform relief, recovery and rebuilding.* Economic Policy Institute.

Helen Arkell Dyslexia Centre. (n. d.). *What is an SpLD?* https://www.helenarkell.org.uk/about-dyslexia/what-is-an-spld.php

Horowitz, J., & Igielnik, R. (2020). *Most parents of K-12 students learning online worry about them falling behind: Parents of children attending school in person are largely satisfied with steps to prevent coronavirus spread but still concerned about exposure*. Pew Research Center.

Horowitz, S. H., Rawe, J., & Whittaker, M. C. (2017). *The state of learning disabilities: Understanding the 1 in 5*. National Center for Learning Disabilities.

Kavkler, M. (2011). Konceptualne osnove obravnave učencev z učnimi težavami [Conceptual bases of dealing with students with learning difficulties]. In M. Košak Babuder & M. Velikonja (Eds.), *Učenci z učnimi težavami – Pomoč in podpora* (pp. 8–42). Pedagoška fakulteta UL.

Kuhfeld, M., Soladan, J., Tarasawa, B., Johnson, A., Ruzek, E., & Lewis, K. (2020). *How is COVID-19 affecting students learning? Initial finding from fall 2020*. Brookings. https://www.brookings.edu/blogbrown-center-chalkboard/2020/12/03/how-is-covid-19-affecting-student-learning/

Kuralt, Š. (2020, June 26). Oprema za vse. To je prvi pogoj [Equipment for everyone. That is the first condition]. *Delo*, Year 62, No. 154, p. 2.

Laslo-Roth, R., Bareket-Bojmel, L., & Margalit, M. (2020). Loneliness experience during distance learning among college students with ADHD: The mediating role of perceived support and hope. *European Journal of Special Needs Education*, 1–15. https://doi.org/10.1080/08856257.2020.1862339

Lithari, E. (2019). Fractured academic identities: Dyslexia, secondary education, self-esteem and school experiences. *International Journal of Inclusive Education*, *23*(3), 280–296.

Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., ... & Crawley, E. (2020). Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry, 59*(11), 1218–1239.

Long, L., MacBlain, S., & MacBlain, M. (2007). Supporting students with dyslexia at the secondary level: An emotional model of literacy. *Journal of Adolescent & Adult Literacy, 51*(2), 124–134.

Magajna, L., Kavkler, M., Košak Babuder, M., Zupančič Danko, A., Seršen Fras, A., & Rošer Obretan, A. (2014). VII. Otroci s primanjkljaji na posameznih področjih učenja [Children with deficits in individual areas of learning]. In N. Vovk Ornik (Ed.), *Kriteriji za opredelitev vrste in stopnje primanjkljajev, ovir oziroma motenj otrok s posebnimi potrebami* (pp. 23–31). Zavod RS za šolstvo. http://www.zrss.si/pdf/Kriteriji-motenj-otrok-s-posebnimi-potrebami.pdf

Markelj, N., & Sember, V. (2020). Povezanost šolske klime z zaznavanjem zadovoljstva z življenjem slovenskih mladostnikov v raziskavi PISA 2018 [The connection between school climate and the perception of satisfaction with life among Slovenian adolescents in the PISA 2018 survey]. *Šolsko polje*, *31*(1/2), 85–107.

Mikuš Kos, A. (2017). *Duševno zdravje otrok današnjega časa* [The mental health of today's children]. Didakta.

MIZŠ. (2020a). *Podatki v zvezi z učenci s posebnimi potrebami v osnovnih šolah s prilagojenim*

izvajanjem in dodatno strokovno pomočjo [Data related to students with special needs in primary schools with adapted implementation and additional professional assistance]. https://www.gov.si/assets/ministrstva/MIZS/Dokumenti/Izobrazevanje-otrok-s-posebnimi-potrebami/Statistike-in-analize/Tabela_ucenci_s_posebnimi_potrebami.pdf

MIZŠ. (2020b). *Podatki o dijakih s posebnimi potrebami v srednješolskih izobraževalnih programih s prilagojenim izvajanjem in dodatno strokovno pomočjo* [Data on students with special needs in primary schools with adapted implementation and additional professional assistance]. https://www.gov.si/assets/ministrstva/MIZS/Dokumenti/Izobrazevanje-otrok-s-posebnimi-potrebami/Statistike-in-analize/Tabela_dijaki_s_posebnimi_potrebami.pdf

National Centrer for Learning Disabilities. (NCLD) (2020). Exploring intersectionality. Understanding student identity to promote equitable social, emotional, cognitive, and academic development during and beyond the COVID-19 pandemic. http://udlguidenes.cast.org

Nusser, L. (2021). Learning at home during COVID-19 school closures – How do German students with and without special educational needs manage? *European Journal of Special Needs Education, 36*(1), 51–64.

O'Brien, T. (2020). Understanding the socio-emotional impact of dyslexia in the inclusive classroom. In *Dyslexia*. IntechOpen. https://doi.org/10.5772/intechopen.94203. https://www.intechopen.com/chapters/73587

OECD. (2019). *PISA 2018 results Where all students can succeed* (Volume II). OECD. Publishing. https://doi.org/10.1787/b5fd1b8f-en

Ott, P. (1997). *How to detect and manage dyslexia: A reference and resource manual.* Heinemann.

Potrč, M., Repič, M., & Krašna, M. (2020). Satisfaction with distance education at the time of the outbreak of the COVID-19 virus epidemic among pupils and students. In *Central European Conference on Information and Intelligent Systems* (pp. 81–86). Faculty of Organization and Informatics Varazdin.

Šprohar, N. (31 May 2020). *Prihodnje leto bo najbrž treba krpati luknje v znanju* [Next year, it will probably be necessary to plug the holes in knowledge]. www.zurnal24.si

The Dyslexia Association. (n. d.). *Specific Learning Difficulties (SpLDs).* https://www.dyslexia.uk.net/specific-learning-difficulties/

Thomson, M. (2007). *Supporting dyslexic pupils in secondary curriculum: Identification and assessment of dyslexia at secondary school.* Dyslexia Scotland, Stirling Business Centre.

Vuorikari, R., Velicu, A., Chaudron, S., Cachia, R., & Di Gioia, R. (2020). *How families handled emergency remote schooling during the Covid-19 lockdown in spring 2020-Summary of key findings from families with children in 11 European countries* (No. JRC122303). Joint Research Centre.

Zhang, J., Shuai, L., Yu, H., Wang, Z., Qiu, M., Lu, L., ... & Chen, R. (2020). Acute stress, behavioural symptoms and mood states among school-age children with attention-deficit/hyperactive disorder during the COVID-19 outbreak. *Asian journal of psychiatry*, *51*, 102077.

Biographical note

Karmen Javornik is a teaching assistant of Special and Rehabilitation Education at the Faculty of Education, University of Ljubljana, Slovenia. Her research interests include inclusion of people with special needs in the context of education, with a focus on general and specific learning difficulties and the development of strategies and models of support and treatment in these areas, which she links to research on executive functioning.

Marija Kavkler, PhD, is an associate professor of Special and Rehabilitation Education. She is an external co-worker at the Faculty of Education, University of Ljubljana, Slovenia. Her field of research is related to inclusive education for children and adolescents with special needs, especially those with general and specific learning difficulties. By combining theoretical knowledge and practical experience she strives for inclusive education of a diverse population of children and adolescents.

Sven Lychatz, PhD, is head of the Institute for Systemic - Integrative Learning Therapy in Leipzig, Federal Republic of Germany. He treats students with dyscalculia, dyslexia and other specific learning difficulties. In research and teaching, he works in the field of perception disorders, students with learning difficulties and general learning requirements with the Karl Marx University Leipzig and the Leipzig Education Agency.

Milena Košak Babuder, PhD, is an Assistant Professor of Special and Rehabilitation Education at the Faculty of Education, University of Ljubljana, Slovenia. Her research interests include the inclusion of people with special educational needs, the impact of general and specific learning difficulties on the academic performance of pupils and students, and the development of strategies and models of support and treatment in these areas, and in particular the impact of dyslexia on learning English as a foreign language.

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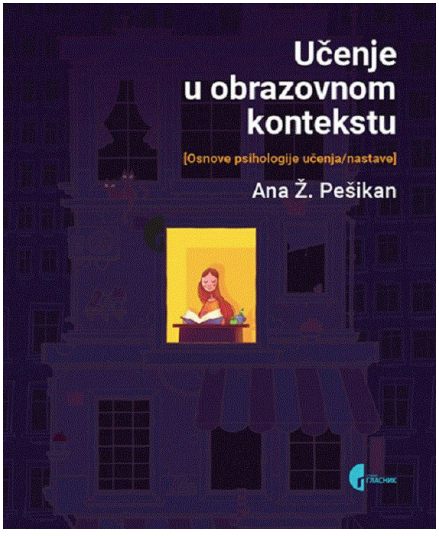
Ana Ž. Pešikan, *Learning in Educational Context: Psychology of Learning/ Teaching* [Srb: Učenje u obrazovnom kontekstu: osnove psihologije učenja/ nastave], Službeni glasnik, 2020; 451 pp.: ISBN: 978-86-519-2435-7

Reviewed by Vladeta Milin[1]



Ana Pešikan's monograph *Learning in Educational Context: Psychology of Learning/Teaching* is a truly exceptional book – it offers many important insights and enough provocative material to make it a page-turner that leaves you wishing for more. What makes it so great is both its content and the way it is conceptualised. You can say this publication is a scientific monograph *and* a textbook in one. When you read sections and paragraphs, the book clearly meets the highest standards for academic writing. It is also skilfully 'accessorised' to answer all expectations for a quality textbook. These remarks will be explained in more detail.

The monograph includes nine sections that are strongly and logically interconnected – starting from the conceptual and methodological frameworks for studying learning/teaching, through the exploration of characteristics of quality learning/teaching, all the way to the deliberation of the very principles and purpose of education in the 21st century. In that sense, it greatly surpasses what is expected from a monograph, both in its volume and scope.

In the first chapter, Ana Pešikan offers a theoretical introduction, addressing various concepts and terms in this field, underlining the difference between two disciplines in psychology – educational psychology and school psychology. After positioning the psychology of learning/teaching in

1 Faculty of Philosophy, University of Belgrade, Serbia; vladeta.milin@f.bg.ac.rs.

educational psychology, the author describes the most essential features of the central concept in the book: *learning/teaching*. Since learning and teaching are seen as inseparable aspects of one phenomenon, the term 'learning/teaching' is used throughout the book. School learning is described as an activity that takes place in a real (as opposed to an experimental) institutional context. It is planned and systematically organised and is primarily influenced by the learning environment.

The second section presents quantitative and qualitative approaches to research in the educational context. This segment contains an exceptionally comprehensive description of research methods – experiment, sociometry, content analysis, action research, and methods of evaluating the process of teaching/learning – with a discussion of their strengths and weaknesses. It is concluded that decisions about an appropriate research approach must take into account the purpose of the research, the nature of the phenomena, and other criteria.

The third section is dedicated to the development of the concept of *active learning*. The theoretical foundations of this concept rely on the works of Dewey, Piaget, and Vygotsky, seen as potential resources for overcoming the problems of the *traditional school*. Relations among these authors' notions were elaborated in a very detailed manner, with an emphasis on their pedagogical relevance and implications for school learning and teaching. In the next chapter, the author explains the concept of *quality education* and presents various factors of educational effectiveness required for high-quality teaching and learning in school. As stated, good school learning is impossible without effective teaching, which requires professional and competent teachers. It is necessary that teachers apply the knowledge about child development, subject content, teaching methods, students' individual characteristics, and similar. Quality education requires teachers who create a stimulating learning environment and successfully cope with the immanent process of change in the field of education as well as in society as a whole.

The problem of learning assessment is the main topic of the book's fifth chapter. This segment includes questions about the purpose of assessment and grading, the types of assessment teachers can apply, the principles and why they are important, the main dilemmas in the learning assessment domain, and similar. Throughout the text, a correlation between assessment and learning is emphasised, stressing that every assessment should be a part of a learning process. An assessment must inform, but it also needs to support and enable further learning and the development of the students. In the sixth chapter, the author explains the content and significance of the concept of *socioemotional*

learning. It is argued that emotions are not an unwanted addition to the cognitive process; on the contrary, emotions are necessary for learning to occur. As a recognition of the importance of emotions in the classroom, Pešikan advocates the development of the *socioemotional competences* of both students and teachers. These competences lead to the improvement of academic achievement and contribute to the students' personal development.

Chapter Seven deals with the principles of school learning in the 21st century. Education needs to correspond to the changing conditions and specificities of contemporary society. The book introduces the main concepts, such as hard and soft skills, key and generic skills, transversal competences, and different models and frameworks for defining key competences. The author presents a list of *key competences for the 21st century* as a syntactical model that overcomes the recognised shortcomings in the European Reference Framework of Key Competences for Lifelong Learning. The next chapter refers to learning in the online environment, reminding us that digital and media literacy are very important for work and life in contemporary society. This section deliberates the positive and negative effects of the online environment on school learning and opens up a space for further discussion, asking for additional evidence and more convincing research findings. The ninth, final chapter of the book addresses a profound and essential topic – the question of the purpose of contemporary education. Exploring different agendas and impacts of certain interest groups, this section ends with considerations of the consequences of growing neoliberal influence on education. Although the author's standpoint can be recognised in the tone and nuances of the text, in the last paragraph, Pešikan calls for a joint rethinking of these topics, not just by the experts in the field of education but by the wider public as well.

Even this brief overview of the chapters' content demonstrates that *Learning in Educational Context: Psychology of Learning/Teaching* comprises the most important, fundamental topics and questions about learning and teaching. Not only the scope of the topics but also the thorough approach and comprehensive writing make this manuscript a remarkable monograph. Offering clear argumentations and insightful interpretations, indicating various perspectives, and elaborating on their implications, the author studiously and convincingly develops the concept of school learning/teaching. What adds value to the book is that many research findings are placed side by side, so various dilemmas or open questions, as well as disagreements among scholars, are presented and left for the reader's consideration. This brings us to the second remark offered at the beginning of this review – the conceptualisation of the publication.

The claim that this manuscript meets all the expectations set before a quality textbook can be supported by listing several important attributes of the text. *Dialogicity* and *heteroglossia* were apparent, for example, in the way the various research and ideas were presented to invite readers to compare the findings and try to resolve the open questions. The *clarity* of the book is provided not only by a very comprehensible, reader-friendly style of writing but also by the creation of numerous tables and figures, summaries, and boxes in the text, as well as definitions offered in the margins. *Engagement* is recognised in all the situations in which the reader encounters well-chosen and reasoned examples, anecdotes, and illustrations. *Stimulation* is found throughout the text, but especially in the 'tasks segments' that are placed at the end of each chapter. These tasks are related to the text that precedes them but are not limited to the recollection of the content. Instead, they encourage readers to explore, compare or combine, create, investigate, or experiment. Finally, a vast space left for the readers in the margins of the text, with the lines offered for writing comments, shows how the recipient is considered, both by expecting and inviting their reactions.

The comprehensiveness and communicativeness of this publication confirm the assessment that this important work will strengthen educational psychology in many ways. The book offers conceptual and terminological discussions, introduces many new concepts and terms and clarifies existing concepts and relations among them. The most significant value is, of course, that the book contains an unexpectedly large number of complex fundamental topics and problems, which are treated in a very studious and thoughtful way. Of particular importance is the fact that a great deal of new research in this area has been presented, as well as that the research has been very skilfully interpreted, brought into connection, and accompanied by substantive discussion of the findings and results. Also, the trajectories for future explorations and the identification of new topics and challenges in the time to come are excellent support and valuable potential for the development of scientific knowledge in this field. Finally, I would like to claim that this monograph has an international quality. Specifically, the rich literature that abounds in the manuscript is primarily foreign, so that – regardless of the fact that the text is written in the Serbian language – readers from all over the world can easily relate to the text, examples, and references.

It has already been pointed out that this book raises many fundamental and interesting questions, so it is very difficult to single any of them out. However, in the introductory part, the author expresses a tacit desire that the publication will invoke readers to offer additions, changes or refinements to it.

As a response to that invitation, a very brief reflection on one topic is offered here, having in mind that it could be a subject of some future, more systematic discussions.

It would be crucial to supplement the considerations of selected topics with pedagogical literature, and particularly to include knowledge and research in the field of didactics. This pedagogical discipline's main subject of study is teaching and learning; therefore, its input is vital for the discussions on learning in the educational context. This supplement, of course, primarily belongs to the didactics scholars themselves, and this book clearly provides an excellent basis for further elaboration and additional insights from a didactic perspective. As part of that endeavour, it would be of great value to explore the areas of intersection between educational psychology and didactics, but also the specifics and differences between them. Certainly, the interconnectedness of these disciplines is quite strong. However, it would be entirely wrong to compound these disciplines to the point of non-recognition. Both disciplines have their tradition and heritage, epistemological and theoretical foundations, wide knowledge base, distinctive subject of study, and a characteristic research approach. Therefore, it would be a mistake to blur the boundaries between them, but it is undoubtedly necessary to emphasise the complementarity of their influences in the effort to study learning and teaching. In any case, it is certain that this monograph is a major work that will undoubtedly contribute to the strengthening of educational psychology, but also a source that should not be missed in didactic studies. This book will unquestionably initiate empirical research and conceptualisation in didactics and can also inspire further development of this pedagogical discipline.

There is no doubt that Ana Pešikan's book *Learning in Educational Context: Psychology of Learning/Teaching* will significantly impact education and that its reception will meet the hopes its author had for the publication and perhaps even surpass them. The author intended this book for everyone who deals with education, precisely with topics of school learning and teaching. However, it can be added that this publication is intended for everyone who is learning and wants to develop and improve themselves. In other words, not only experts in the field will enjoy it. Everyone who is curious about what learning/teaching is and what the prospects and potentials of education are will find many valuable and inspiring insights. That is why the book can be wholeheartedly recommended to a broader public, as well as to the academic community, researchers, policymakers, educators, and teachers.

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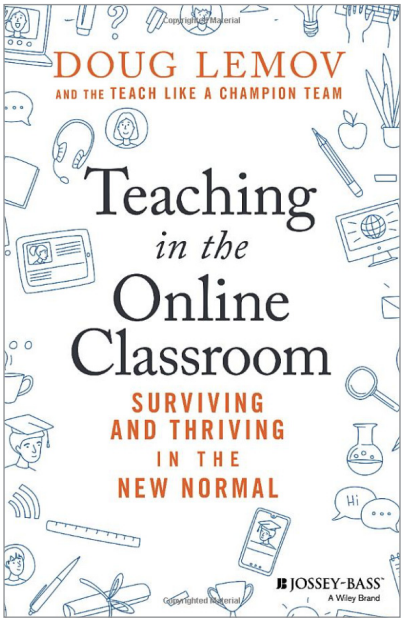
Doug Lemov and The Teach Like a Champion Team, *Teaching in the Online Classroom. Surviving and thriving in the new normal*, Jossey-Bass: 2020; 192 pp.: ISBN 978-1119762935

Reviewed by Laura Rožman Krivec[1]



The book *Teaching in the Online Classroom* presents stories from experts and best practices to promote online learning and provide insights on how educators can help students succeed in the virtual classroom. The author and a group of teacher-leaders on the Teach Like a Champion team share their knowledge and experiences. It is a book about adapting to the new reality of online teaching and is aimed at all teachers who want to transform their skills and their online classroom. The authors provide insights into their teaching in a digital environment – not only through words but also through recorded videos that can be found online. The book's primary goal is to build a community of dedicated teachers who have the skills and are committed to creating the best possible lessons in the so-called new normal.

Much has changed in recent months, Doug Lemov and Erica Woolway write in the introduction, except for the fact that students need us. They note that there is quantifiable data demonstrating that being away from the classroom affects many students. The book introduces new ways that teachers can reach them as effectively and quickly as possible, whether remotely, in the classroom, or through a combination of distance learning and classroom instruction. The authors respond to some questions about how teachers can adapt to the new normal. Two concepts are presented in the introduction, forming the

1 Faculty of Education, University of Ljubljana, Slovenia; Laura.RozmanKrivec@pef.uni-lj.si.

common thread throughout the book. There are two different learning methods used in distance education. Asynchronous learning, which is self-study of prepared materials, and synchronous learning, which is face-to-face interactions with the teacher.

The introduction is followed by seven chapters in which fourteen teaching experts and teacher leaders share their knowledge and experiences with online teaching and learning. All seven chapters include a theoretical introduction followed by examples of good practice and practical guidance for successful learning and teaching in the online classroom. All the chapters are interrelated in content; they also have in common that they include web links to videos showing how teachers use individual methods and approaches in practice. In the book, they share experiences that have worked, and the website also features footage of teachers implementing specific examples of successful learning strategies. The authors provide many useful examples that can easily be brought into remote classrooms.

In the first chapter, Hannah Solomon and Beth Verrilli describe synchronous and asynchronous learning as two forms of distance learning. Asynchronous learning means that 'the work and the learning happen at different times and places', such as when a teacher video records a lecture for students to watch on their own time or gives them an assignment to complete and submit by email. Synchronous learning happens at the same time but in different locations. Both have their advantages and their limitations. According to the authors, asynchronous learning has the following advantages: teachers can create higher quality presentations (possibility of re-recording and improvements, which is not possible with the live version because the live lesson cannot be rewound), students can manage their own time, multiple teachers can use one lesson (which allows task sharing and more control over workload), teachers can set more complex tasks and students can take time to reflect more, and similar. Pre-recorded lessons can be short videos with no expiration date that students can watch anytime and repeatedly. They are used for homework, for reference, to consolidate knowledge and to introduce new content. The disadvantages of this type of learning are that teachers cannot track student understanding, student outcomes are asymmetrical, and students may lose a sense of connection and avoid assignments or complete them without engaging with their content. To prevent this, a teacher can, for example, ask students to open a specific Google document to answer questions and write in it while watching the video.

In contrast, synchronous learning also offers these benefits: the teacher can make and maintain connections, can check for understanding to respond to errors in real time, and it allows for greater student engagement. The limitations

of this type of learning are student and teacher screen fatigue, technical problems, declining student attention and teacher problems coordinating schedules. According to the authors, the goal is to find a way to make the most of both and to take advantage of the natural synergies between the two types of learning.

Jen Rugani and Kevin Grijalva devote Chapter Two to the relationships between students and teachers in front of and behind the screen. To 'dissolve the screen' means raising and strengthening students' awareness of their interactions with their teachers. The key is teaching to connect. It's not just about teaching, learning, and giving students the knowledge and information they need, but also about building community. Ideas on how to put this into practice are presented by two teachers of younger and older students. Both agree with the authors of this chapter that student-teacher relationships are strong when students feel successful, safe, and known. The authors emphasise the importance of the teacher noticing the students and their work, whether the instruction is synchronous or asynchronous. They also give a lot of practical advice on how to do that (e.g., camera on, chat, surveys, strategic cold calling, etc.) and how to let students know that their teachers see and appreciate their efforts (e.g., mentioning the positive, recognition rather than praise, strategic cold calling, feedback, learning from mistakes, etc.). Some of these are well known to us; others represent new practical approaches to teaching and learning.

Chapter Three by Colleen Driggs and Jaime Brillante begins with the importance of a strong culture of attention and engagement and continues with working and long-term memory and why it is essential not to overload working memory. Then it moves on to tips and tricks on how to successfully capture attention online in synchronous and asynchronous lessons. Next are the materials and systems that support engagement. The main message is to involve students in what matters; students need to be activated (e.g., by engaging them in the conversation at the very beginning, not half an hour into the lecture). Teachers should provide clear instructions to students, verbally and nonverbally (e.g., colour coding) that enable students to focus and stay on track or get back on track when needed. This chapter states that it is essential to guide students to being organised (organise space and mind). Shifting classroom activities and reading (reading aloud and having students and teachers read aloud) are just two of the many ideas for managing attention. Finally, the authors believe we must find the right balance between on-screen and off-screen learning and work in the online classroom.

In Chapter Four, Hilary Lewis and Brittany Hargrove focus on pause points, which are brief interactive moments. According to the authors, pause points need to be used early and often, in synchronous or asynchronous

instructional environments. They serve to engage (cognitive engagement and accountability), promote formative thinking, check for understanding, and provide follow-up by teachers, as well as time to apply knowledge in practice.

In Chapter Five, Emily Badillo, Jen Rugani, and Hannah Solomon write about accountability loops and checking for understanding, which the authors believe are at the heart of teaching and learning. There's a difference between 'I taught it' and 'they learned it', not just online but in the classroom. This is an even more significant challenge in an online school. This chapter presents three specific types of assessment loops for checking understanding used by teachers: practice-based implicit assessment, real-time assessment, and lagging assessment. Benefits, limitations, and practical examples are presented for each.

Chapter Six by Darryl Williams and Dan Cotton is about routines and procedures, which include a predictable daily schedule, familiar and visible pathways for students to participate and clarity about needed materials. The authors claim that these benefit teachers, students, and parents. The key to success is a consistent routine. In the first video, the teacher calls the students at the beginning of the lesson and asks them if their materials are prepared. The student's smile shows that she is happy to be seen. This example shows how the chapters of the book are connected. In this chapter, the authors present rules for successful learning in the break rooms and for the opening sequence, where the teacher should be warm, welcoming, and consistent, especially in the first few minutes.

In Chapter Seven, Rob Richard and John Costello write about the importance of technical knowledge. Having enough technical knowledge and experience is essential for online teaching. It is vital that teachers do not waste their precious time on technical matters but rather devote that time to students and their learning needs. In this chapter, the authors present solutions to make online teaching easier, point out simple solutions to common problems, and emphasise how teachers can do their best online. It is about teacher recording, chats, group rooms, shared documents, student submission, screen sharing, and other strategies.

In the final, concluding chapter titled 'Coda: Planning for the Future', Erica Woolway, Emily Badillo, and Doug Lemov discuss the future of education, what happens when we go back to school, and our role as teachers (because students rely on us), equity, staffing models, and other lessons learned in Spring 2020. The final pages are devoted to brief definitions of terms such as 'champion techniques', so teachers can easily find and use them.

The book is written in English, but it would be interesting to read it in Slovenian as well. This would be very welcome for teachers who read

professional literature in Slovenian much more often than in English. In fact, the book was created as an extension of the training they organised for teachers; the places were filled in a few minutes, so they wanted to reach more teachers.

Finally, it is essential to emphasise that many of the techniques mentioned in the book are not only appropriate and vital for online learning but can also be effective in the classroom. Thus, the book is worth reading both when we need incentives for pedagogical work in the online classroom and when live classroom teaching is being conducted in the school. The author also encourages us to talk openly with our students about our and their feelings, assignments and everything related to distance education and learning. Finally, the authors encourage teachers to use these learning and teaching techniques. As the authors write in Chapter Four, use them, use the techniques in practice (not just the pause points the authors present in this chapter), 'because it sure seems like we could all use a little more of all of these things.'

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